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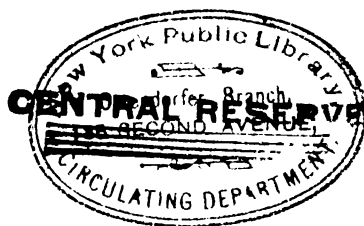
# HANDBOOK OF TECHNICAL TERMS

Used in Architecture and Building and  
their Allied Trades and Subjects

101

BY

AUGUSTINE C. PASSMORE



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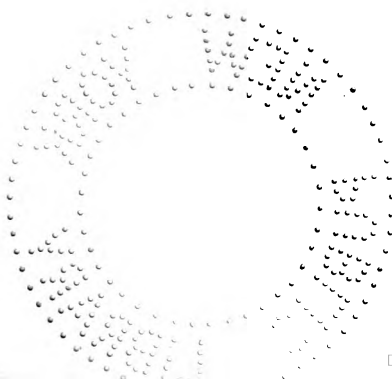
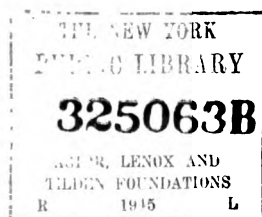
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## PREFACE.

THE compilation of this work originated in the habit of jotting down "Technical Terms" met with in the course of study and practice. These terms and their definitions accumulated so enormously that the compiler was induced to extend his labours still further, so that the result would appeal to the professional man, the student, and the operative workman.

At a first glance some of the terms given may probably appear superfluous, but it should be remembered that it is the aim of the compiler that the work should appeal to all classes connected with Architecture and its allied arts.

Most of the works at present before the public are either not up-to-date, or else they only give the purely architectural terms, to the sacrifice of those purely practical, or *vice versa*.

The compiler therefore considers that no apology is necessary for placing yet another Glossary amongst those already in existence. If the result is of any aid to those in want of such assistance, then the aim of the compiler is accomplished.

Among the list of works consulted in the compilation of this Glossary may be mentioned Gwilt's *Encyclopædia of Architecture*, Nicholson's *Architectural Dictionary*, Parker's *Glossary*, Nuttall's *Dictionary*, Vitruvius's *Civil Architecture*, and also the numerous journals issued in connection with the Building Trades.

AUGUSTINE C. PASSMORE.

LONDON, January, 1904.

C. D. TRANSFER  
SEP 10 1945



## TECHNICAL TERMS USED IN ARCHITECTURE, ETC.

### A.

**ABACISCUS.** Small tesserae or square stones used for a tessellated pavement; a square compartment enclosing a part of the pattern or the entire design of a mosaic pavement; also used as synonymous with "Abacus".

**ABACULUS.** A small table or desk.

**ABACUS.** A plate, shallow block, or small tile forming the uppermost member of a capital, varying in the several orders. It is square in plan in the Tuscan, Doric and Ionic orders. In the Corinthian and Composite orders it is nearly square, but has each side concave and the corners truncated. In the two last-named orders the abacus separates the foliage of the capital from the architrave; it is square in Grecian Doric, without chamfer or moulding; in Roman Doric it has an ogee or fillet round the upper edges; in the Tuscan a plain fillet and a cavetto under it; in the Grecian Ionic it is thinner, with ovolo only; in Roman Ionic, an ovolo and ogee and fillet above. The Saxon abacus (*i.e.*, in buildings belonging to the eleventh century) is generally a long flat stone without chamfer or moulding, but in some cases it is found similar to the Norman abacus, which in the earlier part of the style was square with a plain chamfer on the lower edge or a hollow instead. Other mouldings were introduced into the Norman abacus as the style advanced; the abacus in the Early English style is mostly circular, but sometimes octagonal, and in some cases square, the mouldings are deep

hollows and overhanging rounds; the abacus in the Decorated style is either circular, polygonal or octagonal in the mouldings; rounds are the most common. In the Perpendicular style the abacus is sometimes circular but more often octagonal; when the latter the sides are often slightly hollowed.

**ABACUS MAJOR.** A large trough to wash in.

**ABAISSER.** Burnt-ivory, or ivory-black.

**ABAMURUS.** A buttress or second wall, added to strengthen another.

**ABATED.** Sunk or lowered.

**ABATEMENT.** An obsolete term, signifying the waste of a piece of stuff by forming it to the required size.

**ABAT-JOUR.** A skylight or aperture for the admission of light.

**ABATON.** A building at Rhodes, to which entrance was forbidden to all persons, because it contained a trophy and two bronze statues erected by Artemisia in memory of her triumph in surprising the city, mentioned by Vitruvius.

**ABATTOIR.** A building used for the slaughtering of cattle.

**ABAT-VENT.** The sloping roof of a tower; a penthouse.

**ABAT-VOIX.** The sounding board or canopy over a pulpit or rostrum.

**ABBEY.** A monastery of religious persons; the building adjoining to or near a convent or monastery, for the residence of the head of the house; also applied to the church attached to the establishment, and all other buildings connected with it.

**ABBEY GATE-HOUSE.** A lodge for warders or porters at the entrance of an abbey edifice.

**ABBOT'S LODGINGS.** A complete house, with hall, chapel and every convenience for the residence of a spiritual baron; built in the early times of English ecclesiastical architecture.

**A. B. C. PROCESS OF SEWAGE TREATMENT.** A method devised for precipitating sewage, the constituents being alum, blood and clay; in practice charcoal is substituted for the blood.

**ABBREVIATIONS OF METRIC UNITS.** The following have been decided upon by the International Committee of Weights and Measures:—Length: kilometre, km.; metre, m.; decimetre, dm.; centimetre, cm.; millimetre, mm.; micron,  $\mu$ . Surface: square kilometre, km.<sup>2</sup>; hectare, ha.; are, a.; square metre, m.<sup>2</sup>; square decimetre, dm.<sup>2</sup>; square centimetre, cm.<sup>2</sup>; square millimetre, mm.<sup>2</sup> Volume: cubic metre, m.<sup>3</sup>; stere, s.; cubic decimetre, dm.<sup>3</sup>; cubic centimetre, cm.<sup>3</sup>; cubic millimetre, mm.<sup>3</sup> Capacity: hectolitre, hl.; decalitre, dal.; litre, l.; centilitre, cl.; millilitre, ml.; microlitre,  $\mu$ . Weight: tonne, t.; quintal metrique, q.; kilogramme, kg.; gramme, g.; decigramme, dg.; centigramme, cg.; milligramme, mg.; microgramme,  $\gamma$ .

**ABELE TREE.** A species of white poplar; mentioned by Vitruvius as being serviceable, tough, light, and suitable for carvings.

**ABOBE.** Unbaked bricks in Spain, used for the erection of cottages in Castile and Leon.

**ABOLITE CEMENT.** A cement consisting of calcined and finely pulverised magnesite infusorial earth, and chloride of magnesium; largely employed in the preparation of ornamental mouldings.

**ABOUTSLEDGE.** A large hammer used by blacksmiths.

**ABRAUM.** A red clay used to give a red colour to new mahogany.

**ABREUVOIR.** In masonry, the joint between two stones, or the interstice to be filled up with mortar or cement.

**ABREUVER.** A French term for a drinking pond in abattoirs.

**ABSCISSA OR ASCISS.** A geometrical term given to each segment of a diameter divided by an ordinate.

**ABSIS OR APSIS.** The arched roof of an oven, room of house; the ring or compass of a wheel.

**ABSOLUTE PRESSURE.** The absolute pressure of steam is its pressure reckoned from vacuum; the pressure as shown by an ordinary steam gauge, plus the pressure of the atmosphere, which is 14·7 lb. per square inch.

**ABSOLUTE UNIT OF FORCE.** The force which will generate a unit of velocity when acting on a unit of mass during a unit of time. In England a unit of time is one second, the velocity one foot, and the weight one pound avoirdupois.

**ABSOLUTE WATER METER.** A meter consisting of two pistons, each having an absolute stroke; hence the water is correctly measured.

**ABSORBING WELL.** A shaft or boring for removing either the excess of drainage waters, or foul water produced by manufacturing purposes.

**ABSORPTION.** The taking up of moisture in any material by capillary attraction or other means.

**ABSTRACT OR ABSTRACTING IN QUANTITIES.** Is the method of arranging or apportioning the several works from the dimensions to explain and arrive at the total of each item.

**ABUSE.** The practice in architecture of departing from the most established principles arising from a desire of innovation.

**ABUTMENT.** The solid part of a wall or pier from which an arch springs, thus acting as a support; a skewback and the masonry which supports it. In bridges, the abutments are the walls or piers by which the bridge joins upon the land, banks or sides of the river, etc.; in carpentry and joinery, the meeting of two pieces of timber with the grain or fibres of one running at right angles to the joint and those of the other parallel to it.

**ABUTMENT CHEEKS.** The surfaces on each side of a mortise on which the shoulders of the tenon rests.

**ABUTTALS.** The buttings or boundaries of land or a building.

**ABYSSINIAN PUMP.** A pump consisting of an ordinary hand pump placed on a foundation block, with the well tube coupled direct to the suction branch of the pump. The working barrel and foot valve must be placed below the surface within ten or twenty feet of the water, when the water does not rise to within twenty-five feet of the surface. The pump was originally designed for use in Abyssinian wells.

**ABYSSINIAN WELLS.** Are formed by means of a tube driven into strata which, though hard and compact, is not composed of rock. The part of the tube forming the point is made of steel and measures about three feet in length, and is perforated by a series of holes for admitting the water into the tube. Additional lengths of pipe are screwed on, and the pipe is driven into the ground by means of a cast-iron ram or monkey, until the required depth is reached.

**ACACIA** or **ACACIO** (*Robina pseudo acacia*). Is a durable wood found in America; it is heavy, hard, tough and of a greenish-yellow colour with reddish-brown veins and no large medullary rays.

**ACADEMIA.** In antiquity, a villa or pleasure-house in one of the suburbs of Athens, where Plato and other philosophers assembled.

**ACADEMY.** A school or seminary of learning, in which the higher branches of education are taught.

**ACADEMY FIGURE.** Is a drawing or design, done after a model with crayon or pencil.

**ACANTHUS.** The plant bear's beech or brank ursine, the leaves of which are imitated to a great extent in the foliage of the Corinthian and Composite capitals of columns.

**ACCELERATED VELOCITY.** That when the space passed over goes on increasing or diminishing.

**ACCESSES.** Approaches or passages of communication between the various apartments of a building, as corridors.

**ACCESSIBLE.** In surveying, a place

which admits of having a distance or length of ground measured from it; a height or depth that can be measured by a proper instrument.

**ACCESSORY.** Those parts of a design which are merely added for ornament.

**ACCESS PIPE.** A pipe fixed in a drain at a point as near as possible to the junction of the drain to the sewer to facilitate the testing of the drain.

**ACCESS TRAP.** Is one which can be easily examined or from which obstructions can be removed without breaking or mutilating it.

**ACCIDENTAL COLOURS.** Those complementary colours seen on a white or light ground after looking steadily for some time at a bright-coloured object.

**ACCIDENTAL POINT.** In perspective, is the point in which a straight line drawn from the eye parallel to another straight line cuts the perspective planes; it is the point wherein the representations of all straight lines parallel to the original straight line concur when produced.

**ACCLIVITY.** The slope, inclination or steepness of a line or plane inclined to the horizon taken upwards. In contra-distinction to declivity, which is taken downwards; the talus of a rampart.

**ACCOUPLEMENT.** In carpentry, a tie or brace or the entire work when framed.

**ACCUBITUS.** A room annexed to large churches in which the clergy occasionally reposed.

**ACCUMULATOR.** An apparatus for storing energy by raising a heavy weight by a hydraulic piston.

**ACCUMULATOR.** An apparatus for storing energy in the form of an electric current for an indefinite period, and giving it out again in nearly the same quantity as required. It usually consists of prepared lead plates in dilute sulphuric acid.

**ACCUMULATOR PRESSURE.** The pressure given off by an accumulator. It is constant, and can be readily adjusted as required, by the weights exerted on the accumulator ram.

**ACCUMULATOR PUMPS.** Are usually of the piston and plunger or three-throw plunger type. They are used for forcing the water into the accumulator, and are generally arranged in such a manner that when the accumulator is full the pump is stopped, and started again when the water is drawn from the accumulator.

**ACER** (*Acer campestre*). Is a tree from which bird's-eye maple is obtained; a genus of trees comprehending the maple and sycamore.

**ACERRA.** In antiquity, an altar erected among the Romans near the bed of a person deceased on which his friends daily offered incense until his interment.

**ACESTIDES.** The chimneys of furnaces where brass was made.

**ACETATE OF LEAD.** Sugar of lead, a compound of lead and acetic acid.

**ACETYLENE.** Scientifically called "ethine"; it is a hydrocarbon compound consisting of twenty parts by weight of carbon and two parts by weight of hydrogen. The formation of acetylene takes place on addition of water to calcium carbide.

**ACETYLENE GAS GENERATORS.** Are of various makes. They may be classed under three heads: (1) Those in which water in volume is allowed to rise in contact with the carbide, the gas being regulated by the water being drawn back from the carbide by the increase of pressure in the generating chamber. (2) Those in which the carbide is dropped or plunged into an excess of water. (3) Those in which the water is allowed by various devices to drop or flow in a thin stream on to a mass of carbide, the gas being regulated by the stopping of the water feed.

**ACHIEVEMENT.** The ensigns armorial of a family; an escutcheon.

**ACHROMATIC.** A term expressing absence of colour; without colour; mere white and black, or white and gold, may be considered achromatic.

**ACINOSE.** A term applied to iron ore found in masses and of several colours.

**ACISCULUS.** A small pick used by masons having one end like that of a hammer and the other pointed.

**ACME BOLT MACHINE.** A machine for heading, upsetting and forging bolts.

**ACORN.** The seed or fruit of the oak; imitated to a great extent in architecture, and it is sometimes introduced into the Roman ovolo instead of the egg.

**ACORN-CUP.** The capsule of the acorn.

**ACOUSTICS.** The doctrine or theory of sounds, as applicable to buildings consisting of diacoustics, or direct sounds, and catacoustics or reflecting sounds.

**ACRE.** A measure of land containing 160 square rods or perches, or 4,840 square yards, or 43,560 square feet.

**ACROLITHES.** In sculptures, statues, the extremities only of which are formed of stone.

**ACROPOLIS.** A tower, castle or citadel; a building strictly applicable to a Greek city, and usually erected upon a hill, rock or other natural elevation and devoted to a magnificent temple; a citadel, particularly that of Athens.

**ACROTHERIA.** A small pedestal placed on the apex and also at the extremities of a pediment to support a statue or other ornament; pinnacles or other ornaments on the horizontal copings or parapet of buildings are sometimes called acrotheria; the gate of the Agora at Athens is the only instance in which they appear in Grecian buildings.

**ACROTHERIUM.** Same as Acrotheria; statues placed on the pedestals (acrotheria); sometimes applied to the ridge of a building; the small pieces of wall in balustrades between the pedestal and the balusters.

**ACTINOGRAPH.** An instrument for registering the variation of the chemical intensity of the sun's rays.

**ACTINOMETER.** An instrument for measuring the power of the sun's rays, invented by Sir J. F. W. Herschel, 1825.

**ACTUAL HORSE-POWER.** Actual horse-power, brake horse-power, or effective horse-power, is the power given off from the crank shaft of an engine—that is, the indicated horse-

power minus the power required to drive the engine.

**ACTUS.** A Roman measure of length equal to 120 Roman feet.

**ACUTE ANGLE.** In geometry, less than a right angle, and measured by less than 90° or a quadrant of a circle.

**ACUTE-ANGLED CONE.** Is one in which the opposite sides make an acute at the vertex, or whose axis in a right cone makes less than half a right angle with the side.

**ACUTE-ANGLED TRIANGLE.** Is a triangle having all its angles acute; every triangle has at least two acute angles.

**ACUTE ARCH.** A lancet arch.

**ADAMANT.** A very hard stone, used by the ancients for cutting and polishing other hard stones and glass; the diamond.

**ADAMANT CEMENT.** Is a dry powder ready for use by mixing it with water; it is light in weight and does not crack or shrink; applied in the same way as plaster.

**ADAMANTINE CLINKERS.** Are bricks similar to Dutch clinkers, but harder, heavier, denser, smoother surface and of a fine pink white colour.

**ADHESION or ADHESIVE STRENGTH.** Is the power with which mortar, cement, glue, etc., stick to brick, stone, etc.

**ADIT or ADITUS.** The passage, approach or entrance to a building; also applied to the horizontal shaft of a mine, driven for the purpose of ventilating, watering or draining.

**ADIT.** An opening—nearly horizontal—by which a mine is entered, or an opening for carrying away water or ores. Also called a drift or tunnel.

**ADJACENT ANGLE.** In geometry, an angle immediately contiguous to another, so that one side is common to both.

**ADJUSTABLE BOOT.** The runner or hopper at the bottom of an elevator in which material required to be raised is placed.

**ADJUSTABLE CRAMPS.** Are of various forms, and of wood, iron and other metals; usually worked by a screw or automatic action and

serving to hold or squeeze two pieces more firmly together.

**ADJUSTABLE PIPE WRENCHES.** Some are adjusted by means of a screw, others are self-adjusting; used for turning pipes or sockets when screwing them together and making the joints.

**ADJUSTABLE WRENCHES.** Also called spanners, screw-keys, screw-hammers, nut-wrenches, monkey-wrenches, etc.; used for turning the nuts on bolts; they are adjustable by means of a screw so that the jaws will take any size nut within reasonable limit.

**ADMEASUREMENT.** The measuring of dimensions by a rule; the dimensions ascertained; the process in the art of mensuration for measuring and determining dimensions of works.

**ADMISSION PIPE.** See Inlet Pipe.

**ADYLUM.** The secret dark chamber of a temple; the chancel; the inner and most sacred part of a heathen temple.

**ADZE or ADDICE.** A cutting or chipping instrument used to chip surfaces in a horizontal direction (the axe being used to chop materials in a vertical position); the cutting edge of the adze is at right angles to the handle.

**ÆCCLESIOLO.** In Domesday Book, a chapel subordinate to the mother church.

**ÆDES.** An inferior kind of temple; in Christian architecture, a chapel; also sometimes applied to a house.

**ÆDICULA.** A small chapel, house or building of any kind; sometimes applied to the niches of tabernacles in a wall which held statues of the Lares or Penates.

**ÆGRICANES.** A term applied to rams' heads when sculptured on friezes, altars, etc.

**ÆGYPTILLA.** A species of Egyptian ornament.

**ÆLITE PRECIPITANT.** A mixture employed for precipitating sewage; it consists of alumina, iron, salt and oxidizing compounds, seven grammes per gallon being used for ordinary domestic sewage, preceded by screening, and filtered by filtration through magnetic oxide  $\text{Fe}_3\text{O}_4$ .

**ÆMASIA.** A fence or fence wall.

**ÆRARIIUM.** A treasury among the Romans; the place where public money was deposited.

**AERATION OF FILTER BEDS.** The aeration of the filters at sewage works is accomplished by means of compressed air and pipes perforated with holes, or by vertical ventilators built in the side of the walls of the filter bed to accelerate the working of the filter.

**AERIAL CABLE, RAILWAY or TRAMWAY.** A suspended wire or cable for transporting weights or materials from one place to another overhead; used in hilly districts, over rivers, etc.

**AERIAL PERSPECTIVE.** The relative apparent recession of objects from the foreground, owing to the quantity of air interposed between them and the spectator. It accompanies the recession of the perspective line.

**ÆRO.** A basket, according to Vitruvius, used by the Romans to carry earth in.

**AEROBES.** Micro-organisms found in sewage which cannot live without air.

**AEROBIC.** A term applied to the organisms which purify sewage in filter beds in the presence of light and air.

**AEROGRAPH.** An instrument for painting, consisting of a small air pump, worked by the foot of the operator, the air pump being connected to the pen by means of a flexible tube.

**AEROPHORE.** An apparatus for safety in exploring places containing dangerous gases.

**AEROSTATICS.** The branch of hydrostatics which treats of the equilibrium and pressure, etc., of air and gases.

**ÆSYMNIUM.** A building in Megara, erected by Æsymnius round the tomb of his countrymen who died in battle against the Persians.

**ÆTHOUSA.** The portico on the sunny side of the court of a Greek dwelling.

**ÆTIAISE.** The term applied by

the Greek architects to the slabs forming the face of the tympanum of a pediment.

**ÆTOMA or ÆTOS.** A term applied by the Greek architects to the tympanum of a pediment.

**AFRICAN GREEN.** Is a pigment produced from copper.

**AFRICAN OAK.** Sometimes called African teak or mahogany; is of a dark red colour, hard, close grain, generally free from splits or defects, difficult to work; brought from Sierra Leone.

**AFTER DAMP.** Carbonic acid; stythe; the products of the combustion of fire damp.

**AFTER FLUSH.** In sanitary work, a term applied to a water-closet valve or waste preventer that allows water to run for a short time after letting go the handle or pull.

**AGALMA.** A sculptural ornament or image.

**AGALMATOLITE.** A soft stone extensively used in China where it is cut into images, hence called figure stone.

**AGER.** A Roman acre of land.

**AGGER.** A heap or mound of any kind formed of stone, wood or earth.

**AGGREGATE.** Gravel, stone chip-pings or similar material used as one of the ingredients in concrete; the cementing or binding material is called the matrix.

**AGIASTERIUM.** The sanctuary, which is the basilicæ of the Latin Church.

**AGONIC LINE.** An irregular line of no magnetic variations, passing through the magnetic poles of the earth, along which the magnetic needle points directly north and south.

**AGORA.** The market place of a Grecian town; a place of assembly in a Greek city for the transaction of all public business.

**AGRAFE.** A French term used by builders for small cramps used in fixing chimney pieces, etc.

**AGUILLA.** An obelisk, or spire of a church tower.

**AICH'S METAL.** An alloy of copper, zinc and iron.

**AIGUILLE.** An instrument to pierce a rock for the lodgment of gunpowder in blasting.

**AIGUILLES.** The needle-like points or tops of granite rocks.

**AIR BOX.** A square wooden tube used for conveying air into the fan of a single drift or into a sinking pit.

**AIR BRICK.** A brick perforated with holes, built in the external face of a wall for the purpose of admitting air to the inside; also applied to an iron grating when used for the same purpose.

**AIR COURSE.** The passage along which a current of air travels.

**AIR CROSSING.** An arched way of wood or bricks by which one current of air is carried over another, or over the same current, after having traversed its course of workings.

**AIR DRAIN OR DRY AREAS.** A narrow channel or area formed around such parts of the walls of a building as are below the ground, to prevent the earth from resting against the walls in order to prevent moisture.

**AIR DRILL.** Generally called the pneumatic drill, and is driven by the elastic pressure of condensed air.

**AIR ESCAPE.** A contrivance for letting off the air from water pipes.

**AIR FLUE.** A flue for conveying air to or from a room for the purpose of ventilation.

**AIR HOLES.** Are holes made for admitting air to ventilated apartments, the timbers of floors and roofs, for the prevention or destruction of the dry rot.

**AIR-INLET COVER.** A contrivance used in connection with sewer ventilating shafts for allowing fresh air to enter the sewer and preventing sewer gas returning.

**AIR LIFT PUMP.** An ordinary tube well, down which is fixed a small pipe provided with a nozzle through which compressed air is forced.

**AIR LOCK.** A pneumatic contrivance for providing workmen with air whilst working in a hollow caisson

whose lower chamber is filled with compressed air to exclude the water.

**AIR PIPE.** A small pipe attached to a trap to admit air and prevent syphonage.

**AIR SHAFT.** A passage to admit air, chiefly used in mining.

**AIR SHAFT.** A shaft used specially for ventilation purposes.

**AIR SLAKING.** Is when lime is exposed to the air it will gradually absorb moisture which causes it to fall into a powder.

**AIR STOVE.** A stove with pipes distributed over its surface for the supply of heated air.

**AIR - TIGHT MANHOLE COVERS.** Iron covers to manholes, or inspection chambers, made air-tight by means of a sand or gauze joint to prevent gases arising from the sewer to the street.

**AIR-TIGHT STOPPERS.** Stoppers for closing up ends of pipes used for inspection or cleaning out purposes, such as the cleansing eyes, or cleansing arms in intercepting traps.

**AIR TRAP.** A trap immersed in various ways in water to prevent foul air rising from sewers or drains.

**AIR TRAP.** A trap placed at the junction of a drain to a sewer for the purpose of arresting the flow of foul air, rats, etc., from the sewer into the drain.

**AIR TRUNK.** A contrivance to prevent the stagnation of putrid effluvia in crowded apartments.

**AISLE OR ALA.** The wing, side passage, division or the lateral division of a church, partially separated from the central portion, or the nave and choir, by columns of pillars.

**AITRE.** A hearth or chimney.

**AJAMBE.** The French term for a window; it differs from the usual French window in having four or more casements with separate hinges and fastenings complete; the ordinary kind generally consists of two narrow upright ones known as French casements.

**AJUTAGE.** A tube fitted to the mouth of a vessel to modify the discharge of the contents.

**AJUTAGE or ADJUTAGE.** Is part of the apparatus of an artificial foundation, being a kind of tube fitted to the mouth of a vessel through which water is played.

**ALABASTER.** A compact granular variety of sulphate of calcium or gypsum, chemically termed sulphate of lime; chiefly used for ornamental purposes.

**A LA GRECQUE.** One of the varieties of fret ornament after the Greek fashion.

**ALARM.** Alarms are generally in the form of a bell and are rung by various mechanical contrivances to give warning of danger or to attract attention.

**ALARM BELL.** A contrivance in the form of a bell to ring when the water level in a reservoir or cistern is either too high or too low.

**ALÆ.** (Latin, wings.) Recesses opening out of the atrium of a Roman house.

**ALBA.** A beacon, or lighthouse.

**ALBARINE.** Is a superior white enamel valuable for its hardness, whiteness and easy application, one gallon covering on an average about fifty yards.

**ALBARIUM.** Whitewash; according to Vitruvius and Pliny, a white stucco of plaster, made of a pure kind of lime burned from marble, and used to spread over the roofs of houses.

**ALBARIUM OPUS.** A species of stuccowork used by the ancients.

**ALBERIA.** A shield without arms.

**ALBIN.** An opaque white mineral.

**ALBURNUM.** The white and soft part of the wood or sapwood between the inner bark and the hard wood.

**ALCHA.** A cellar, pantry or an apartment for the reception of drinking vessels.

**ALCORANS.** In oriental architecture, high slender towers attached to mosques, in which the Koran is read.

**ALCOVE.** A recess in a room; that part of a sleeping chamber wherein the bed is placed; an arbour; any sheltered retreat.

**ALDER** (*Alnus glutinosa*). This timber is light and tough and has no odour; the English alder is close and fine grained; found also in both Europe and Asia. Alder when first cut is white, but changes to a deep red, and eventually fades to a reddish-yellow of different shades; usually grows in damp situations such as swamps or the low banks of rivers.

**ALEACERIA.** A palace, castle or other large edifice.

**ALEATORIUM.** An apartment in a Roman house set apart for the use of persons playing with dice.

**ALE BENCH.** A bench in or before an ale house.

**ALE HOUSE.** A house where ale is sold.

**ALESIS.** Loopholes in the walls of a castle or fortification, through which arrows may be discharged.

**ALGEBRA.** Universal arithmetic in which symbols are employed to denote operation, and letters to represent number and quantity.

**ALHAMBRA.** In Saracenic architecture, the royal palace of the kings of Granada.

**ALIDADE.** The movable arm of a graduated instrument for taking altitudes, distances, etc.

**ALIEN PRIORIES.** Cells or small religious houses erected in different countries; they are termed alien owing to their dependence on large foreign monasteries.

**ALIPTERION.** In Roman architecture, a room used for the bathers for anointing themselves.

**ALIVOT PARTS.** Such parts of a number as will exactly divide it without a remainder.

**ALIZARINE.** A colouring matter obtained from madder.

**ALKORANES.** In Eastern architecture, high slender towers attached to mosques and surrounded by balconies. Same as Alcorans.

**ALLETTE.** A term applied to a small wing of a building; also applied to a pilaster or buttress.

**ALLEY.** An aisle; any part of a church left open for access to another part; a way, walk or passage, generally narrow; a lane.

**ALLORIUM.** A piazza, corridor or covered way in the flank of a building.

**ALLOW FOR.** In quantity taking, means that the item to which these words refer will not be adjusted at completion, but the builder is at the time of preparing his estimate to affix a price which he considers sufficient to do the work and take all risks in connection thereto.

**ALLOY.** A composition formed by melting two or more metals together.

**ALLUVIUM.** Soil washed down and deposited by rivers.

**ALMACANTAR.** Lines parallel to the horizon, and conceived to pass through every degree of the meridian.

**ALMASIA.** The archives of a church ; a library.

**ALMEHRAB.** A niche in the mosques of the Arabs used for praying in.

**ALMOND FURNACE.** A furnace in which the slags of litharge, left in refining silver, are reduced to lead ; called a sweep by refiners ; used for separating all sorts of metals from cinders, etc.

**ALMOND TREE.** The tree which produces the almond ; the wood is of a hard, heavy, oily or resinous kind, somewhat pliable.

**ALMONRY or ALMERY.** A cupboard near the altar for holding the sacred vessels ; formerly a room or place where alms were distributed.

**ALMSHOUSE.** A house where poor people are lodged and provided for by private endowment or public support.

**ALQUIFORE.** Lead ore found in Cornwall ; also known as potters' ore, used by them to varnish their wares.

**ALRUNÆ.** Small images carved out of roots of trees, held in much veneration by the ancient northern nations.

**ALSIRAT.** The hair-narrow hell bridge of the Moslem.

**ALTAR.** An elevated table of either stone, marble or wood, dedicated to the ceremonies of religious worship ; a communion table.

**ALTAR PIECE.** The ornamental sculpture or painting behind the

altar ; the entire decorations of an altar.

**ALTAR SCREEN.** A screen between the altar and the choir which separates it from the presbytery and lady chapel.

**ALTAR TABLE.** A communion table.

**ALTAR TOMB.** An altar-like monument placed over a tomb ; or a raised monument resembling a solid altar.

**ALTARE CHORI.** A reading desk in a church.

**ALTARE TARUM.** The lustre, chandelier or cresset suspended over an altar.

**ALTERNATING ELECTRIC DYNAMO.** A device for transforming electric power into mechanical power, the reverse to that of an alternating current dynamo.

**ALTERNATING VALVE CISTERNS.** Are of various forms. One form consists of a lower chamber containing a two-gallon flush and a reserve holding about five gallons. When the handle is pulled the alternating valves are actuated, the one closing the connection between the reserve and the flushing chamber, the other being open to allow a discharge of the two-gallon flush.

**ALTERNATION.** In design, consists in the arrangement in due succession of contrasted forms.

**ALTIMETER.** An instrument (or the art) for taking altitudes geometrically.

**ALTITUDE.** In geometry, the length of a line drawn perpendicularly from the vertex of a figure to the base ; height.

**ALTITUDE OF THE EYE IN PERSPECTIVE.** A right line let fall perpendicular to the geometrical plane.

**ALTITUDE OF A PYRAMID.** A perpendicular line from its vertex to the plane of its base.

**ALTO-RELIEVO.** Sculptured work in which the figures project half or more from the flat surface on which they are carved.

**ALUM.** A double sulphate of alumina and potash, etc. ; extracted from various minerals called alum ores.

**ALUMINIUM.** Is a metal which by uniting with oxide forms the universally distributed earth alumina, the chief constituent of clay and an ingredient of many gums and minerals.

**ALUMINIUM BRONZE.** Consists of from 90 to 95 per cent. of copper and 5 to 10 per cent. of aluminium.

**ALUMINO-FERRIC SEWAGE TREATMENT.** A method of placing aluminoferric cakes in cages in the flow of the sewage, which dissolves them in proportion to requirements. The cages are generally placed at varying depths in the sewer, so that, as the water passing along rises, the contact with the ferric cakes is gradually increased, and hence the quantity of the chemical dissolved is also increased.

**ALURE or ALUR.** This term is sometimes used for passages of various kinds, such as covered walks in streets; or the gutter, passage or gallery in which persons could walk behind a parapet on the top of a wall.

**ALVA.** Is a weed, very pliant and springy, used by upholsterers for stuffing purposes.

**AMAASA.** Such pieces of glass as are used in enamelling.

**AMALGAM.** A mixture of mercury with any other metal, tin, lead, etc.

**AMANDOLA.** A green marble with white spots.

**AMASSETTE.** A scraper used in grinding colours.

**AMBER.** Is one of the ingredients of varnish. It is a light, transparent substance, found between beds of wood coal; it is the hardest and most durable of the gums, tough, costly, slow in drying, keeps its colour well, difficult to dissolve, obtained chiefly from Prussia, or on the coasts of the Baltic after very severe storms.

**AMBILTI.** Is sheet glass of a brilliant appearance; it is much prized by the Italians on account of its softness for staining.

**AMBITUS.** An enclosure; more strictly applied to the space round a building, such as a churchyard or a castleyard; a small niche made in the

wall for the reception of an urn or body.

**AMBO or AMBONE.** An elevated reading desk; a rostrum, or a raised platform.

**AMBULATIO.** The space between the wall of the cell of a temple and the columns of the peristyle; also called Pleroma.

**AMBULATIO.** According to Vitruvius, walks or places of exercise adjacent to theatres.

**AMBULATORY.** A sheltered place for exercise in walking; a cloister; a gallery.

**AMERICAN AND CANADIAN ASH.** Are of a reddish-white colour, but darker than the English varieties and possess the same characteristics; the Canadian ash is the better of the two.

**AMERICAN OAK.** Is imported in logs, some being quite sixty feet long; the white variety is good tough timber, but the reddish coloured is poor and should not be used for carving, as the chisels, etc., turn it black.

**AMERICAN RED PINE** (*Pinus rubra*, also *Pinus resinosa*) or **CANADIAN RED PINE.** Is of a reddish-white colour with clean fine grain, tough, elastic, not much sap or pith, similar to Memel, but has larger knots; generally imported in logs from sixteen to fifty feet long, and ten to eighteen inches square.

**AMERICAN SPRUCE.** Includes four varieties, viz., the White Spruce (*Abies alba*) found in the colder parts of America; the Black Spruce (*Abies nigra*) and the Wenlock Spruce (*Abies Canadensis*) found chiefly in Lower Canada; the Red Spruce (*Abies rubra*) known as Newfoundland Red Pine is imported from Nova Scotia. American Spruce is inferior to that from Norway, and closely resembles that obtained from the Baltic; the difference between the black and white varieties is only in the colour of the bark of the tree; the largest and best timber is obtained from the black variety.

**AMERICAN TUBE WELLS.** Are generally driven the whole distance from the ground level to the depth

of water bearing strata, but in ordinary tube wells it is the practice to first dig a well a certain depth from the ground level, and to drive the tube the remaining distance.

**AMETHYST.** In heraldry, is a purple colour in noblemen's coats of arms.

**AMMAILARE.** To enamel.

**AMMETER.** An apparatus for measuring current in ampères.

**AMOUNT OF SEAL.** The distance the surface of the water has to be lowered before a trap is unsealed.

**AMPÉRAGE.** The measurement of the current strength in any circuit.

**AMPÈRE.** The practical unit of electrical current.

**AMPÈRE FEET.** The product of a circuit in ampères by the resistance in feet through which the current passes.

**AMPÈRE METER.** A form of galvanometer to indicate the strength of the current passing in ampères.

**AMPÈRE MINUTE.** One ampère flowing one minute.

**AMPÈRE SECOND.** One ampère flowing one second.

**AMPÈRE TURN.** The magnetised effort of a coil carrying a stated electrical depends on the product and the number of the complete turns or loops in the coil and the current in ampères. The magnetic effect thus produced is measured in ampère turns.

**AMPHIBOLOID.** A rock composed of amphibole and felspar.

**AMPHIPROSTYLE.** A temple having a portico in front and also behind, but without columns at the sides; the number of columns used never exceeded four in the front and four in the rear.

**AMPHITHEATRE.** An oval or circular theatre with the arena in the middle and rows of seats all round, which rose higher as they receded from it; an edifice formed by the junction of two theatres at the proscenium, so as to admit of seats all round the periphery.

**AMPHITHURA.** In the Greek Church, the veil or curtain opening to the folding doors, and dividing the chancel from the rest of the church.

**AMPHORA.** An ancient two-handled vessel usually of earthenware.

**AMPHORAL.** In decoration, carving shaped like an amphora or vase.

**AMPULLA.** A narrow-necked, big-bellied vessel used among the Romans in anointing the body after bathing; the vessel for the wine of the Eucharist.

**AMULET.** In decoration, a figure or character to which miraculous powers were supposed to be attached, and which particularly distinguished the buildings of Egypt.

**AMUSSIUM.** An instrument formerly used by masons and carpenters to obtain a true plane surface.

**AMYGDALOID.** A trap rock embedding nodules of various minerals.

**ANABATHRA.** Steps to any elevated situation, as the anabathra of theatres, pulpits, etc.

**ANABATHRUM.** A pulpit, desk, or high seat.

**ANACAMPTERIA.** The lodgings of persons who fled for sanctuary to privileged religious houses.

**ANACAMPTICS.** The doctrine of reflected light.

**ANACHORITA.** The cell of a hermit.

**ANACLASTICS.** The doctrine of refracted light.

**ANAEROBES.** Micro-organisms found in sewage which cannot live in air.

**ANAEROBIC.** A term applied to those organisms which break down and liquefy the solid matter in sewage when light and air are excluded; also see Aerobic.

**ANAGLYPH.** An ornament engraved, embossed or chased in relief.

**ANAGLYPHIC WORK.** A species of sculpture wherein the figures are made prominent by embossing.

**ANAGLYPHY.** The art of encasing and embossing in relief.

**ANALEMMA.** A projection of the sphere on the plane of the meridian; an instrument of wood or brass on which this kind of projection is drawn; used also to designate a wall, pier or buttress.

**ANALOGIUM.** A tomb over the bodies of saints; formerly applied to pulpits wherein the gospels and epistles were read.

**ANALYSIS.** The separation of a compound body into its constituents.

**ANAMORPHOSIS.** A distorted drawing in perspective occasioned by too near a point of view and from the injudicious attitude or situation of the object, but perfectly true according to the laws of perspective.

**ANATRON.** Scum of melted glass; the salt which collects on the walls of vaults.

**ANCHOR.** A decorative moulding used in the orders, and applied to the echinus; also an ornament in the form of the fluke of an anchor, often cut in the ovolo of Ionic capitals, and in the bed mouldings of Ionic and Corinthian cornices.

**ANCHORED.** A term applied to a cross when its extremities are turned back like the flukes of an anchor.

**ANCIENT LIGHT.** A window overlooking adjoining property, which cannot be blocked up by the adjoining owner, because the right to light from the adjoining property has been acquired by long usage, the minimum being twenty years.

**ANCON.** In decoration, a carved drinking-cup or horn; an elbow or angle, or corner-stone.

**ANCONA FOOT MEASURE.** Is 1·282 of an English foot.

**ANCONE.** The trusses or consoles sometimes employed in the dressings or antepagments of apertures, serving as an apparent support to the cornice of them at the flanks; ornamental brackets cut on the keystone of an arch or the sides of door cases; the corners or quoins of walls, cross beams or rafters.

**ANDIRONS or FIREDOGS.** Are iron bars with legs to support logs of wood in fire-places.

**ANDRON.** An apartment in a house appropriated by the Greeks and Romans to the male members of the family.

**ANELECTRIC.** Non-electric.

**ANELECTRODE.** The positive pole of a galvanic battery.

**ANEMOGRAPH.** An apparatus which registers the amount and variation of the force of the wind.

**ANEMOGRAPHY.** A description of the winds.

**ANEMOLOGY.** The science of the winds.

**ANEMOMETER.** An instrument for measuring the course, force and velocity of the wind.

**ANEMOSCOPE.** A machine which shows the direction of the wind.

**ANGIPORTUM.** Among the ancients, a narrow lane between two rows of houses.

**ANGLE.** A corner; the mutual inclination of two straight lines meeting in a point which is called the angular point, vertex or point of concurrence, the two lines being called legs.

**ANGLE BAR.** In joinery, the upright bar at angle of a polygonal window, shop-front, etc.

**ANGLE BEAD.** Same as Staff-bead; bead stuck on an angle.

**ANGLE BRACE or ANGLE TIE.** A beam across the corner of a building connecting the two adjoining wall plates of a hipped roof; a piece of timber fixed to the two extremities of a piece of quadrangular framing, thus making it partake of the form of an octagon.

**ANGLE BRACKET.** A bracket placed in the vertex of an angle, and not at right angles with the sides.

**ANGLE CAPITAL.** Used in Ionic capitals to the flank columns which have their volutes placed at an angle of 45° with the planes of the front and returning friezes.

**ANGLE CHIMNEY.** A chimney placed in the angle of a room.

**ANGLE FLOAT.** In plastering, a float made to any internal angle to the planes of both sides of a room.

**ANGLE IRON.** Wrought iron bars of L section.

**ANGLE IRON ROLLING MILL.** A mill having rollers turned in such a manner that the space between the two rollers when closed together forms the shape of the required angle iron.

**ANGLE IRON SHEARS.** A machine for cutting L or angle irons, in

which the knife or cutter is of a similar shape to the angle bar, the cutters being actuated by levers, cams, or hydraulic power.

**ANGLE LAVATORY.** That fixed in the angle formed by two walls.

**ANGLE METER.** An instrument used by geologists for ascertaining the dip of inclined strata. Any instrument for measuring angles.

**ANGLE MODILLION.** A modillion placed in a direction parallel to a diagonal drawn through a cornice at its mitre.

**ANGLE OF APPLICATION.** The angle which the line of direction of a power gives the lever it acts upon.

**ANGLE OF INCLINATION.** The angle an inclined plane makes with the horizon.

**ANGLE OF REFRACTION.** The angle made by a ray of light, and a line perpendicular to the surface of the medium through which it is passing.

**ANGLE OF REPOSE.** The natural slope which the face of a heap of loose material assumes when left to itself.

**ANGLE OF REPOSE.** The utmost inclination at which a vehicle will stand at rest upon a road. The gravity of the load and the friction of the load are equal when the vehicle is at the angle of repose.

**ANGLE OF TRACTION.** The angle which the direction of a power makes with the inclined plane.

**ANGLE OF VISION.** In perspective, the angle under which an object or objects are seen, and upon which their apparent magnitudes depend ; in practice it should not exceed 60°.

**ANGLE OF A WALL.** The angle contained by the vertical planes of two walls which form the angle of the building.

**ANGLE RAFTER.** A hip rafter.

**ANGLE RIB.** A piece of curved timber placed over those two parts of a curved or arched ceiling, vault, etc., which form an angle with each other so as to range with the common ribs (or rafters) on each side or return part.

**ANGLE STAFF.** A substantial cylinder of wood plugged to the external angle of a plastered wall to protect it from injury.

**ANGLE STONES.** Same as Quoins.

**ANGLE TIE.** In roofing, is a short timber placed across the angle formed by two wall plates meeting.

**ANGLO-SAXON.** Style of architecture before the year 1066 ; its chief characteristics were semi-circular arches, very thick walls, no buttresses, very deficient in windows, heavy style of building.

**ANGULAR CAPITALS.** Is a term given to the modern Ionic capital from its having the four faces alike ; corner capitals are also called angular capitals from their occurring at the angles of porticoes in order that their capitals may correspond with those of the columns in the flank as well as the front of the building.

**ANGULAR DISTANCE.** In geometry, the space included between the lines drawn from two objects to the eye.

**ANGULAR MODILLIONS.** Those which are placed at the return of a cornice in the diagonal vertical plane, passing through the angle or mitre of the cornice.

**ANGULAR NICHE.** One formed in the angle or corner of a building.

**ANGULAR PERSPECTIVE.** A term applied to the horizontal lines, both of the front and end of a building, converging to vanishing points and terminating in the horizon ; sometimes called oblique perspective.

**ANGUS SMITH'S PROCESS OF COATING PIPES.** A method of coating pipes with a mixture of coal-tar pitch, linseed oil, and resin heated to about 300° F. The pipes must be thoroughly cleansed from mould, sand and rust, and heated to about 700° F., dipped vertically into the mixture, and allowed to remain until the iron acquires a temperature of 300° F.

**ANHYDRITE.** A sulphate of lime.

**ANIME.** A transparent amber-coloured resin.

**ANNEAL.** To temper glass or metals by subjecting them to intense heat and then letting them cool very slowly ; to heat glass and earthenware so as to fix colours ; to temper by heat ; to bake, as tiles, etc.

**ANNEALING.** The art or process of tempering glass or metals.

**ANNEALING or SOFTENING STEEL.** Consists of raising hardened steel to a red heat and allowing it to cool gradually, thus regaining its original softness.

**ANNEXE.** An addition to a building or enclosure.

**ANNUAL RINGS.** Are the several concentric layers or rings seen upon examining the cross section of trees, known by botanists as "exogens" or outward growers; these annual rings are most prominent in oak.

**ANNUALS.** Plants which live for one season only.

**ANNUAL MOULDINGS.** Are those having vertical sides and horizontal circular sections.

**ANNULAR VAULT.** A vault that springs from two walls that are circular on plan.

**ANNULATED COLUMNS.** Those clustered together or joined by rings or bands.

**ANNULET.** A small square member in the Doric capital; a ring-shaped fillet round a column; also applied to a small flat moulding and to a straight fillet.

**ANNULETS.** Are the fillets between the hypotrachelium sections of a Doric capital; in the Roman Doric order they are usually three in number and of equal size, with rectangular sections; in the Grecian examples they vary from three to five.

**ANNUNCIATOR.** A mechanism connected with a bell to indicate the room where the bell was pulled.

**ANODE.** The way by which the electric current enters substances through which it passes.

**ANOMALITE.** An irregular mineral.

**ANORTHITE.** A variety of felspar.

**ANOTTA.** A reddish-yellow vegetable substance used for dyeing purposes.

**ANSTON.** The village in Yorkshire where the stone used for building the Houses of Parliament was obtained.

**ANTARALA.** The inner vestibule of a Hindoo temple.

**ANTÆ.** Are square pillars or pilasters terminating the walls of a temple.

**ANTECAPITULUM.** Part of a cloister before the door of a chapel-house.

**ANTECHAMBER.** A room or passage leading into the chief apartment; or a room or passage to an inner chamber for servants and persons in waiting.

**ANTECHAPEL.** A passage to the choir or body of it; used in universities for the outer part at the west end of a chapel.

**ANTECOUR.** The approach to the principal court of a house, frequently serving for communication with the kitchen, cellar, stables, etc.

**ANTEFIXÆ.** Are upright ornamental blocks or tiles placed at intervals on the cornice; also along the side of a roof to conceal or terminate the ridges formed by the overlapping of the roof tiles; also known as Greek tiles.

**ANTEMURAL.** The outer wall of a castle; or that which separates a presbytery from a choir; a barbican entrance before a castle.

**ANTEPAGMENTA or ANTEPAGMENTUM.** The stone or stucco dressing or architraves of a doorway; this term does not apply if it is of wood.

**ANTEPARALLELS.** In geometry, lines which make equal angle with two other lines, but in a contrary direction.

**ANTEPENDIUM.** The frontal hangings of the altar.

**ANTEPORTICO.** An outer porch or vestibule; the propylæum in classic architecture.

**ANTERIDES.** Buttresses or counterforts for strengthening walls.

**ANTEROOM.** A room leading into the chief apartment.

**ANTESOLARIUM.** A balcony facing the sun.

**ANTETEMPLE.** The nave in a church.

**ANTEVENNA.** An awning or projecting roof of woodwork; a penthouse before a shop.

**ANTHEMION.** A Greek term signifying flowers, applied to the honeysuckle ornament.

**ANTHOPHYLLITE.** Hornblende of a clove brown colour.

**ANTHRACITE.** A hard coal, not bituminous, which burns without smoke, with intense heat and with almost no flame, found principally in South Wales and in the United States.

**ANTHROPOSTYLES** or **STATUE COLUMNS.** Same as Atlantes.

**ANTICLINAL.** Dipping in opposite directions, like the opposite sides of a roof from the ridge.

**ANTI-CORROSIVE PAINT.** Is the term applied to different compositions which consist chiefly of oil, strong driers, and a pigment mixed with very fine sand, chiefly used for external work, sold dry, and requires only to be mixed (not ground) with oil.

**ANTICS.** In architecture, figures of men, beasts, etc., placed as ornaments to buildings.

**ANTICUM.** A porch to a front door; the space between the front columns of a portico and the wall of a cellar.

**ANTILIA.** An ancient machine similar to the modern pump.

**ANTIMENSUM.** A portable altar or consecrated table, used as a substitute for a proper altar.

**ANTIMETER.** An optical instrument for measuring angles under 10 degrees.

**ANTIMONY.** A brittle silvery white unoxidisable metal, found in a crude state combined with sulphur.

**ANTIMONY VERMILION, SULPHIDE OF ANTIMONY.** Is a pigment produced from antimony ore, sold in a fine powder, without taste or smell; is insoluble in water, alcohol or essential oils.

**ANTIMONY YELLOW.** Is a preparation of antimony of a deeper colour than Naples yellow, and similar in its properties; principally used in enamel and porcelain painting; it is of various tints; that of a bright yellow is not affected by foul air, although blackened by sugar of lead.

**ANTIPAGMENTS.** Ornaments in carved work on the architrave, jambs, posts or puncheons of doors.

**ANTIQUARIUM.** An apartment or

cabinet in which the ancients kept their books and vases; a repository for antique monuments.

**ANTIQUE.** A relic of antiquity; ancient art of the classical age.

**ANTISEPTIC.** Resisting putrefaction; a substance used to prevent putrefaction.

**ANTI-SYPHONAGE PIPES.** Pipes carried from just the outer side of a trap upwards to open air, to prevent the trap being unsealed by syphonage.

**ANTRELLUM.** A small grave or grotto; also a small temple.

**ANTRIUM.** The main quadrangle in a Roman dwelling house; also the enclosed court in front of an early Christian basilican church.

**ANTRUM.** An early temple for Christian worship.

**ANTRUM TUMBALE.** A sepulchral cave or grotto.

**ANTWERP BLUE.** Is a pigment somewhat brighter and lighter than Prussian blue, or ferro-prussiate of alumine, having more of the terrene basis, but all the other qualities of Prussian blue except its extreme depth.

**ANTWERP BROWN.** A preparation of asphaltum ground in strong drying oil, by which it becomes less liable to crack.

**ANVIL.** A large iron block generally pointed at one end; it has a very hard, smooth, horizontal surface on the top of which smiths hammer and shape their work.

**APARTMENT.** A room in a house; a space enclosed by walls and a ceiling, which latter distinguishes it from a court or area.

**APATITE.** A phosphate of lime.

**APERTURE.** A gap or passage; an opening in a wall.

**APEX.** The top or highest point of a cone, spire, roof, etc.

**APEX STONE.** The stone at the top of a pediment or gable.

**APHANECITE.** An indistinct arseniate of copper.

**APHANITE.** An indistinct compound of hornblende, quartz and felspar.

**APHRITE.** An earthy variety of carbonate of lime having a silvery lustre.

**APIARY.** A place where bees are kept.

**APIS.** The sacred bull of the Egyptians kept in state at Memphis, sometimes introduced into decoration.

**APLASTIC.** Not plastic or easily moulded.

**APLOME.** A mineral of a deep orange colour.

**APODYTERIUM.** An apartment at the entrance of the ancient baths used for disrobing whether for bathing or gymnastic exercises; also applied to a dressing-room or ante-room to a bath in Roman villas, contiguous to the *taconicum*.

**APOPHYGE or APOPHYSIS.** Is a moulding the section of which is partly concave and partly straight, used in the Ionic and Corinthian orders for joining the bottom of the shaft to the base as well as to connect the top of the fillet to the shaft under the *astragal*; also called *Scape*.

**APOTHECA.** A storehouse or cellar used by the ancient Greeks; also an apothecary's shop; a cabinet.

**APOTHESIS.** A recess on the south side of the chancel of a church, fitted up with shelves.

**APPARATUS.** A complete set of instruments for performing any operation or experiment.

**APPIAN WAY.** A celebrated road leading from Rome to Brundisium; so named from Appius Claudius.

**APPII FORUM.** The forum built by Appius the Roman consul; it was situated about fifty miles from Rome near the town of Piperno.

**APPLE TREE.** A wood generally hard and close in grain, and of reddish-brown tints, largely used in Tunbridge turnery, etc.

**APPLICATE.** A chord bisected by the diameter.

**APPLICATE ORDINATE.** A right line applied at right angles to the axis of any conic section, and bounded by the curve.

**APPRAISAL.** A valuation by authority.

**APPRAISER.** A person licensed and sworn to estimate and fix the value of goods and estates.

**APPRENTICE.** One bound for a

term of years to serve at some trade or craft under a master who in turn binds himself to instruct him.

**APRICOT TREE.** A native wood of Armenia used by the French in turnery.

**APRON.** In plumber work, the strip of lead used at the lower side of a chimney where it comes through a roof; the upper edge of the lead is turned into the brickwork or masonry, and the lower edge laid on the slates; also called *Apron Flashing*.

**APRON.** The sill or lower part of a window; a platform or flooring of plank raised at the entrance of a dock.

**APRON or PITCHING PIECE.** A horizontal piece of timber for supporting the carriages, or rough strings and joistings in landings.

**APRON LINING.** The wood lining round the well hole of a staircase.

**APSE, APSIS, ABSIS, CONCHA or EXEDRA.** A vaulted semicircular or polygonal recess at the termination of the nave of a church; sometimes applied to the canopy over an altar.

**APsis GRADATA.** A bishop's throne in cathedral churches.

**APTERAL TEMPLE.** One without columns on the sides.

**AQUAJECT.** A small hand pump which can be fixed in any bucket or a cistern; generally used for fire, garden, and window cleaning purposes.

**AQUAMALE.** A holy water basin.

**AQUATINT or AQUATINTA.** A variety of engraving-like drawings in Indian ink.

**AQUEDUCT.** An artificial conduit or channel for conveying water from one place to another, sometimes raised on arches, and frequently carried on or under the ground.

**AQUEMOLA.** A water mill.

**AQUILA.** A reading desk, when its shape is that of an eagle with extended wings, supported by a pedestal.

**ARABESQUE.** A building after the Arabian style; generally applied to a style of ornament for pilasters, friezes, etc., consisting of conventional foliage without animal forms.

**ARABO-TEDESCO.** A style of architecture consisting of a mixture of Moorish or Low Grecian with German Gothic.

**ARA DIGNITATIS.** An altar at which none but the highest ecclesiastics perform divine rites.

**AREOSTYLE.** The widest mode of intercolumniations; one of the five proportions used by the ancients for regulating the intercolumniations or intervals between the columns in porticoes and colonnades; the greatest interval or distance which can be made between columns in eight modules or four diameters; also applied to a temple which has its columns placed widely apart.

**AREOSYSTYLE.** The method of proportioning the intervals between columns coupled or ranged in pairs, with an interval generally of half a diameter betwixt the coupled ones, and of three diameters and a half betwixt the pairs.

**ARBITRATOR.** A person chosen by parties in a dispute to decide between them; an umpire whose decision is final.

**ARBOR.** The principal spindle or axis upon which a ring or wheel is turned in a lathe; the axis which communicates motion to the other parts of a machine.

**ARBORES.** Brass branches for lights suspended from ceilings.

**ARBOR VITÆ.** A tree which attains to a height of from about forty to fifty feet; its wood is of a reddish colour, very light, soft and fine grained, formerly used in house carpentry.

**ARBOUR.** A seat covered with branches of trees; a bower; a summer house.

**ARC.** A brilliant spark of light obtained by breaking a circuit in which a current is flowing. If its voltage be above, say, fifty volts and the resistance fairly small, this arc may be maintained so long as the "break" (or distance between the broken ends of the circuit) be not too great, and this "break" will depend on the current and the voltage. The arc is kept up at the expense of the ends of the conductors

and may be maintained under water, paraffin oil, etc.

**ARC.** A segment or part of a circle or any portion of its circumference; a straight line joining the ends or extremities of an arc is called the chord; a bow, vault or arch.

**ARCA.** A coffer or a place in a vaulted chamber for sepulchral purposes; an enclosed space; an excavation before the basement storey of a house; a beam of wood which has a groove in it from end to end; a chest in which the Romans deposited their money.

**ARCADE.** A series of arches supported on columns; a series of recesses with arched ceilings or soffits; a walk arched above; a long arched building, gallery or vaulted avenue lined on each side with shops.

**ARCÆ.** In Roman architecture the gutters of the cavedium.

**ARC-BOUTANT.** Same as a Flying Buttress.

**ARC DOUBLEAU.** An arch forming a projection before the soffit of a main arch or vault, in the same manner as a pilaster breaks before the face of a wall.

**ARCELLA.** In mediæval architecture, a cheese room.

**ARCH.** Is a curved structure of stones or bricks so arranged as to support each other by mutual pressure, and thus become capable of sustaining a superincumbent weight; the thrust of an arch is not necessarily perpendicular to the skewback; all arches have more or less outward thrust. The following is a list of the forms of arches: semicircular, segment, elliptic, stilted, horeshoe, ogee, wheel arch or bull's eye, drop arch, lancet, equilateral, segmental pointed, trefoil, cinquefoil, camber, inverted, relieving, Queen Ann, Welsh arch, multifoil, straight French or Dutch, four centred or elliptic Gothic, rampant, depressed, flat, triangular, and the shouldered arch.

**ARCH.** In geometry, a part of any curved line, as of a circle or ellipsis.

**ARCHÆOLOGY.** The study of ancient art; particularly that of the Middle Ages.

**ARCHAIC.** Primitive, so ancient as to be rude, or extremely simple.

**ARCH BAND.** That portion of an arch or rib which is seen below the general surface of vaulting.

**ARCH BRICK** or **VOUSOIR.** A wedge-shaped brick used in the construction of arches.

**ARCH BUTMENT.** Same as Flying Buttress.

**ARCH BUTTRESS.** Is an arch-formed prop in masonry which connects the walls of the upper and central portion of an aisled structure with the vertical buttress of the walls; also called Flying Buttress.

**ARCH OF EQUILIBRATION.** That which is in equilibrium in all its parts; having no tendency to break in one part more than in another.

**ARCH SHEETING.** Are voussoirs which do not show themselves at the end of an arch.

**ARCH STONE.** The keystone of an arch.

**ARCHED.** In mining, the roads in a mine, when built with stones or bricks, are generally arched level drifts.

**ARCHEION.** A recess in a Grecian temple, for the reception of the treasures of the deity to whom the temple was dedicated.

**ARCHEION.** The office in Athens where the state documents were preserved.

**ARCHES COURT.** The supreme court of appeal in ecclesiastical causes lying within the province of Canterbury, so called from the church of St. Mary-le-Bow, whose top is of stone pillars built archwise, where it was anciently held.

**ARCHETUS.** A saw for cutting stones; also applied by Muratori to a crane or pulley for raising stones to the upper part of a building.

**ARCHIEPISCOPAL PALACE.** The dwelling of an archbishop.

**ARCHIMEDEAN DRILL.** Consists of a spindle on which is cut a screw with a very coarse thread; the drill fits into a socket at one end, whilst on the other is a loose knob; on the screw is a nut by moving which from end to end the drill is made to

revolve first in one direction and then in another.

**ARCHIMEDEAN SCREW.** Originally a machine for raising water invented by Archimedes; it consisted of a tube rolled in a spiral form round a cylinder.

**ARCHIMEDEAN PUMP.** A pump constructed by adapting the Archimedeal screw for raising water.

**ARCHITECT.** A person competent to design and superintend the erection of any building.

**ARCHITECTONICS.** The science of architecture.

**ARCHITECTURE.** Is a science applicable to the art of constructing domestic, ecclesiastical, municipal, palatial or other buildings, and the adornment of the same according to the several orders or styles; it may be divided into three classes: civil, naval and military.

**ARCHITHOLUS.** A round chamber, the sudatorium of a Roman bath.

**ARCHITRAVE.** The group of mouldings round the opening for a door or window; the ornamental moulding running round the outside curve of an arch; the lower of the three principal members of the entablature of an order, being the chief beam resting immediately on the column.

**ARCHITRAVE CORNICE.** An entablature consisting of an architrave and cornice only (the frieze being omitted). Cornices of this description are adapted to situations where the regular entablature would seem out of proportion to the body which it crowns; seldom used with columns or pilasters unless through want of height.

**ARCHITRAVE DOORS.** Those having an architrave on the jambs and over the door.

**ARCHIVOLT.** The ornamental band of mouldings round the voussoirs or archstones of an arch, which terminates horizontally upon the impost.

**ARCHIVOLT.** The curved line in the arch of a bridge formed by the upper sides of the archstones in the face of the work; sometimes applied to the whole set of archstones which appear in the face of the work.

**ARCHIVOLTUM.** In mediæval architecture, an arched receptacle for filth; a cesspool; a common sewer.

**ARCHPILLAR.** The main pillar.

**ARCHSTONE.** The keystone.

**ARCHWAY.** A way or passage under an arch; an aperture in a building covered with a vault; usually an arched passage or gate wide enough to allow carriages to pass through.

**ARC LAMP.** An electric lamp in which the light is produced by a voltaic arc formed between two carbon rods.

**ARC LAMP.** The arc is here maintained between two carbon rods, which are kept about one-tenth of an inch apart. It has a candle power of from 250 to several millions.

**ARCOGRAPH.** An instrument for drawing a circular arc without a central point.

**ARCS DOUBLEAUX.** A French term for arch bands.

**ARCULA.** A small coffer or box.

**ARCUS.** An arca in the form of an ancient basilica.

**ARCUS.** An arch.

**ARCUS ECCLESIE.** The arch dividing the nave of the church from the choir or chancel in mediæval architecture.

**ARCUS PRESBYTERII.** In mediæval architecture, the arch over the tribune marking the boundaries of its recess.

**ARCUS TORALIS.** In mediæval architecture, the lattice separating the choir from the nave in a basilica.

**ARDESIA.** A slate used in Italy for covering roofs.

**AREA.** In geometry, the superficial content of any figure.

**AREA.** A vacant space about the sunken basement of a building; a small court or place before the windows in a basement.

**AREA DRAIN.** A narrow area drain, not covered, on the basement floor of a building, to remedy or prevent dampness in the connecting walls.

**AREA EFFECTIVE.** The minimum active sectional area of any member under stress.

**AREA WALL.** The wall which forms the sides of an area.

**ARENA.** An open space in the centre of an amphitheatre; the middle of a temple or enclosed place; sometimes applied to the body of a church.

**ARENARIOUS.** Sandy; composed of sand grains.

**ARENARIUM.** An amphitheatre; cemetery, crypt or sepulchre.

**ARENICOLITES.** Markings on some sandstones, supposed to be worm burrows.

**AREOMETER.** Any instrument for measuring the specific gravity of liquids.

**AREOPAGUS.** The court in which the areopagites or supreme judges of Athens assembled.

**AREOSTYLOS.** Intercolumniations when their distance from each other is four diameters.

**ARERDE.** Reared, built or raised up.

**ARGAND BURNER.** A gas burner consisting of a hollow ring from which the gas is emitted through a row of fine holes, forming a cylindrical flame.

**ARGENT.** The white colour representing silver, the symbol of purity, justice and gentleness in coats of arms.

**ARGENTAN.** An alloy of nickel with copper and zinc.

**ARGENTATION.** A coating with silver.

**ARGENTINE.** A silvery white variety of carbonate of lime.

**ARGIL.** Potters' earth; alumina.

**ARGILLACEOUS.** Of the nature or consisting of clay.

**ARGILLIFEROUS.** Containing clay.

**ARGILLITE.** Clay slate.

**ARGILLO-ARENACEOUS.** Consisting of clay and sand.

**ARGILLO-CALCAREOUS.** Consisting of clay and calcareous earth.

**ARGILLO-CALCITE.** A calcareous earth with a large proportion of clay.

**ARGILLOUS.** Consisting of clay; clayey.

**ARGYROCOPEION.** The mint at Athens.

**ARK.** A shelter; a depository; a place of protection from the floods; the sacred repository of the tables of the law, etc., among the Jews.

**ARK.** A chest used in farm houses for keeping meal or flour in.

**ARMARIUM.** A niche or cupboard near the side of an altar.

**ARMATURE.** Are iron bars or framing employed for the consolidation of a building.

**ARMATURE.** A piece of iron or steel, usually soft iron, used to complete the magnetic current of any magnet. A special armature is seen in the dynamo; it is wound with conductors and generally revolves on a shaft between the pole pieces of the magnet.

**ARMENIAN ARCHITECTURE.** The edifices in Armenia erected previously to the cultivation of a Græco-Roman architecture, supposed A.D. 260-314.

**ARMENIAN BOLE.** A species of clay from Armenia.

**ARMENIAN STONE.** A blue carbonate of copper.

**ARMILLA.** An iron ring, hoop, or brace in which the gudgeons of a wheel move; a kind of bracelet worn by the Greeks.

**ARM IRONS.** Bars extending from a shop front for the support of the blinds.

**ARMoured CONCRETE.** Also called "Ferro concrete"; a method of disposing iron rods embedded in the concrete to give additional strength.

**ARMoured HOSE.** A hose of india-rubber protected by wire circumferentially wound.

**ARMOURY.** A storehouse, room or apartment for the reception and preservation of instruments of war.

**ARNOTTO.** The name of a vegetable substance obtained from the West Indies, of an orange red colour, soluble in water and spirit of wine; it is not adapted for painting; used as an ingredient in lacquering.

**ARONADE.** Embattled; a junction of several lines forming indentations, like the upward boundary of an embattled wall, except that the

middle of every raised part is terminated by the convex arch of a circle, which arch does not extend to the length of that part.

**AROURA.** A Grecian measure of 50 feet; an Egyptian measure of 100 square feet.

**ARRAGONITE.** A remarkable form of carbonate of lime found in different shapes, from hexagonal prismatic crystals of coralloid masses.

**ARRIERE VOSSURE.** A secondary arch; an arch placed within an opening to form a larger one; and sometimes answering to the purpose of a discharging arch.

**ARRIS.** The external or salient angle formed by the meeting of two plane surfaces; to arris in carpentry signifies to plane off the sharp angle of a board so as to leave a very slight chamfer.

**ARRIS FILLET.** A strip of wood of a triangular section used for raising the slates against chimney shafts, etc. When the arris fillet is used to raise the slates at the eaves of a building it is called the "eaves board," "eaves lath," "eaves catch," or more generally the "tilting fillet"; also applied to a square wooden fillet fixed at the angle of a wall to finish the plastering.

**ARRIS GUTTER.** A wooden gutter of **V** form fixed to the eaves of a building.

**ARRIS RAIL.** A wooden rail formed by cutting a piece of timber four or five inches square diagonally into two, so that each piece is triangular in section; used chiefly in post and rail fencing.

**ARRISWISE.** In bricklaying, tiles laid diagonally; a rectangular piece of timber is said to be cut arriswise when it is sawn diagonally from one angle to the opposite angle; chiefly used in rail fencing; arranged diagonally.

**ARROW-HEADED CHARACTERS.** Certain characters, called also cuneiform or wedge-shaped, from their resemblance to a wedge, composing inscriptions found on bricks, rocks and monuments at Babylon, Persopolis, Nineveh and other ancient cities.

**ARSENAL.** A public establishment where naval and military engines are manufactured or stored.

**ARSENIC.** A brittle elementary metal of a steel grey colour; it is occasionally found alone, but is generally combined with nickel, cobalt and other metals.

**ARSENIC YELLOW or KING'S YELLOW.** Is made as its name implies from arsenic; it injures several other colours when mixed with them; it is not durable and is a dangerous pigment to use in external work.

**ARSHIN.** A Russian measure of length, equal to two and one-third feet English.

**ARTESIAN GRADIENT.** See Virtual Slope.

**ARTESIAN PUMPING LEVEL.** The level at which heavy pumping balances the flow of an artesian well, giving a maximum continuous supply.

**ARTESIAN WELL.** A "deep well" in which the water rises without pumping up to or near the surface.

**ARTESIAN WELLS.** First made at Artois by boring for water to a bed where it is lower than its source, so as to obtain a constant supply of it.

**ARTESIAN WELL SCREEN.** A screen made of wrought iron tubing with holes drilled and countersunk and the surface grooved to provide water ducts around the body of the screen to take advantage of the full surface.

**ARTIFICER.** A skilled workman; a mechanic; an inventor; a person who works with his hands in the manufacture of anything; his intellectual acquirements, independent of mere operation by hand, place him above an artisan, whose knowledge is limited to the rudiments of his trade.

**ARTIFICIAL DRAUGHT.** That formed by artificial means. There are three general methods in use, *viz.*, (1) the steam blast, by which the products of combustion are ejected from the funnel in the same way that exhaust steam from a locomotive produces a draught; (2) by making the boiler room air-tight and forcing air into it by means of a

fan until the pressure is above that of the atmosphere, the only vent being through the furnace to the funnel; (3) by an air blast delivered under the fires with a closed ash-pit.

**ARTIFICIAL FOUNDATIONS.** Those made of concrete, layers of planking, piles, etc.

**ARTIFICIAL POZZUOLANAS.** Are those made from clay of a suitable composition by a slight calcination.

**ARTIFICIAL STONE.** Many kinds of material and methods are employed in the production of artificial stone, the best known being, perhaps, that of Messrs. Ward, Stuart & Ransome.

**ARUNDELIAN.** Belonging to the Earl of Arundel; a term applied to the Grecian marbles collected by him, and now in the possession of the University of Oxford.

**ASABOTUM.** A kind of painted or chequered pavement used by the Romans before the invention of mosaic work.

**ASBESTOS.** Is a fire acid and proof fibrous mineral. The raw material is obtained chiefly from Australia, Canada, California, Italy. It forms the basis of several substances useful to the builder; Italian asbestos is grey or brown in colour, and is considered the best, the Canadian coming next, which is of a white colour.

**ASBESTOS BUILDING FELT.** Is a fireproof felt made in rolls.

**ASBESTOS CONCRETE COATING.** Is a liquid of a drab colour; it is used to cover beams or to retard the action of fire upon them.

**ASBESTOS PAINTS.** Are chiefly used for internal rough woodwork, to protect it from sparks or light flames; will not stand the weather. Mixed with oil in two coats and thinned when necessary with warm water.

**ASBESTOS ROOFING.** Is made from canvas cemented to a surface layer of felt and a Manilla lining in compact flexible sheets resembling leather.

**ASBESTOS SHEATHING.** Is a kind of thin felt, fireproof, and is used for lining wooden partitions, etc.

**ASH** (*Fraxinus excelsior*). This timber is found in England, Hungary, Asia and America. It is very tough, somewhat elastic and easily worked, of a brownish-white colour with longitudinal yellow streaks; pieces of a milk-white colour are the best, those of a reddish tinge or dirty white being deficient in toughness; in old trees the central portion becomes brown, therefore pieces of this colour should be rejected as they are liable to decay.

**ASH FIRE.** A slow fire used in chemical operations.

**ASHLAR.** Masonry built of hewn stone; the stones are brought to a uniform size, the minimum depth or thickness of each stone being twelve inches and built in courses.

**ASHLAR or ASHLER.** Freestones as they are brought rough from the quarry.

**ASHLAR or ACHELOR.** Hewn stone, used for the facings of walls.

**ASHLAR WALL.** Generally implies that a wall is only faced with ashlar, the back being built of bricks or rubble.

**ASHLER or ASHLERING.** Short upright quartering fixed in garrets about two feet six inches or three feet high from the floor, being between the rafters and the floor, in order to make the room more convenient by cutting off the acute angle formed by the rafters.

**ASH PAN.** A pan beneath a grate for ashes.

**ASH PIT.** A receptacle or place for ashes.

**ASLER.** A term applied by Vitruvius to a rafter.

**ASPECT.** Look; view; appearance; the point of the compass to which the face of a building faces, thus a front to the south is said to have a south aspect.

**ASPALT or ASPHALTE.** A hard bituminous substance which is solid at ordinary temperatures and rendered fluid by heat; it may be either natural or artificial.

**ASPHALTUM.** A bituminous substance used by the ancients as a cement, and now employed in paving, roofing, flooring, pointing, etc.

**ASPHALTE FOR PAVING PURPOSES.** Consists of pitch, creosote oil and gravel or ashes; a cubic yard of gravel or ashes requires two cwt. of pitch and four gallons of oil.

**ASPHALTED ROOFING FELT.** Is about one-eighth of an inch thick, nearly black in colour and has a strong odour of asphalte, used for covering roofs of temporary buildings, or under slates, etc.

**ASPHYXIATOR.** A machine for smoke testing drains.

**ASSEMBLAGE.** The joining or uniting several pieces of timber together, or the union of them when jointed.

**ASSEMBLAGE OF THE ORDERS.** In architecture, the placing of columns upon one another in the several ranges.

**ASSEMBLING.** The putting together of a framework the various pieces of which have already been separately prepared and fitted.

**ASSEMBLY ROOM.** A room or suite of rooms in which people assemble for parties, etc.

**ASSERIS.** Small rafters immediately beneath the tiles of a roof.

**ASSESS.** To value property for the purpose of being taxed.

**ASSESSMENT.** A valuation of property, etc., for taxation, or a specific sum charged on the person or property.

**ASSESSOR.** A person appointed to assess property for taxation.

**ASSESSOR.** The official making an assessment; a referee appointed to decide a competition or to fix the value of property.

**ASSETS.** The property of an insolvent debtor; the stock-in-trade and entire property of a merchant or of a trading association or company; goods or estate of a deceased person subject to the payment of his debts.

**ASSIGNEES IN BANKRUPTCY.** Persons appointed under a commission of bankruptcy to manage the estate of a bankrupt for his creditors.

**ASSIGNMENT IN BANKRUPTCY.** The transfer of a bankrupt's property to assignees for the benefit of the creditors.

**ASSIZE COURT.** A building for the accommodation of the officials and the public at the sessions.

**ASSULA or ASTULA.** Chippings of blocks of stone; small marble slabs.

**ASSYNT MARBLE.** A white and greyish-white British marble found in Sutherlandshire.

**ASSYRIAN ARCHITECTURE.** Of the period of Nineveh and the lower dynasties.

**ASSYRIAN BRICKS.** Resembled thick tiles, being twelve to fourteen and a half inches square and about four inches thick; they were generally of a pale yellow or red colour, but occasionally they were found glazed with a thick coating of different colours with subjects traced on them.

**ASTEROLEPIS.** A gigantic fossil ganoid of the old red sandstone.

**ASTRAGAL.** A small semicircular moulding; a little moulding round the top or bottom of a column in the form of a ring; a sash bar.

**ASTRAGAL.** In plumbing work, a bead round a large lead pipe to hide a joint.

**ASTYLAR.** Columnless or without columns; a term that expresses the absence of columns or pilasters where they might else be supposed to occur.

**ASYLUM.** In the Greek states, the temples, altars, sacred groves and statues of the gods; a place provided for the protection of debtors and criminals who fled for refuge; an institution for the care or relief of the dumb, insane, blind, etc.

**ASYMPTOTE.** A line which approaches nearer and nearer to some curve, but though infinitely extended would never meet it.

**ATACAMITE.** Prismatic green malachite; a native muriate of copper so called from Atacama in Chili where first found.

**ATELIER.** A sculptor's or painter's studio or workshop.

**ATHANOR.** An ancient term for a metal furnace.

**ATHENÆUM.** A temple in Athens dedicated to Athene; a school founded by the Emperor Hadrian, at Rome, for the promotion of literary and scientific studies.

**ATKINSON'S CEMENT.** Is a natural

cement made by burning nodules found in geological formations; sets rapidly, but attains no great ultimate strength.

**ATLANTES.** Male figures used as columns or pilasters to support an entablature.

**ATRAMENTUM.** A dye made of soot mixed with burnt resin or pitch, used by the ancient painters; used also as a varnish.

**ATRIUM.** A court surrounded by porticoes in the interior part of Roman houses; the entrance hall and chief apartment in a Roman house; a fore court.

**ATTEND, ATTENDANCE.** When a workman of one trade requires the assistance of one of another trade, the latter is said to attend on the former.

**ATTIC.** A continuation upward of a façade above the principal cornice. Attics may be plain or pilastered, and the pilasters may be panelled and otherwise enriched or have statues or caryatides placed in front of them.

**ATTIC.** Usually an uppermost room in a house where the ceiling is square with the sides.

**ATTIC BASE.** The base of a column consisting of an upper and lower torus, a scotia and fillets between them.

**ATTIC ORDER.** A low order of architecture, used over a principal order, never with columns, but with antæ or small pilasters; an order of small square pillars at the uppermost extremity of a building.

**ATTIC STYLE.** A pure classical and elegant style.

**ATTIC STOREY.** The upper storey of a house when the ceiling is square with the sides to distinguish it from garrets.

**ATTICURGUS.** A term applied by Vitruvius to the case of a column, as divided by a scotia or trochilus with a fillet above and below, and beneath all a plinth.

**ATTRIBUTES.** In decorative architecture, are certain symbols of office or character added to the principal figure, as a club to Hercules, a spear to Pallas, etc.

**AUBIGNY STONE.** Is of a yellow colour similar to Caen, but heavier and harder, weathers badly.

**AUDIENCE CHAMBER.** A chamber in which to give formal audience.

**AUDIT.** An authorised examination of accounts with a hearing of the parties concerned in the result of such an examination; a final account.

**AUDIT HOUSE.** An appendage to a cathedral in which the business belonging to it is transacted.

**AUDIT OFFICE.** An office where accounts are audited.

**AUDITORIUM.** An apartment in monasteries for the reception of strangers; also a place where the Roman orators and poets recited their compositions.

**AUDITORY.** A bench on which a judge sits to hear causes.

**AUGEAN.** Full of accumulated filth.

**AUGER.** A tool for boring large holes in wood; it consists of a wooden handle terminated at the bottom with steel; a screw auger has a gimlet point and twisted channel for letting the dust escape; a shell auger is semi-cylindrical and terminates in a simple cutting edge.

**AUGER.** A tool for earth boring, made of steel, the cutting edge being of hardened steel; when filled it is drawn out, opened and emptied.

**AUGER FISHING TOOL.** A tool employed in wells and other bore hole sinkings; used when the auger has got loose from the boring rod.

**AUGERS.** For cutting through and bringing up earths, shales, soft rocks or disintegrated stuff from the bottom of borings; are made similar to those used for wood, the bottom being a hollow cylinder terminated by a point or cutting edge, and a sort of tongue to support the loosened materials.

**AUGITE.** A mineral of a black or greenish-black colour, found in volcanic rocks; pyroxene.

**AULA.** An area or open place; in Roman architecture, a court or hall.

**AULCOLUM.** A small church or chapel.

**AUREOLA.** A halo or circle of rays with which painters and sculptors surround the head of Christ, the Virgin and the saints.

**AUTOMATIC FLUSHING SYPHON.** A self-acting siphon used for flushing sewers and drains.

**AUTOMATIC FLUSHING TANK.** A self-acting siphon constructed in a tank of iron or other material.

**AUTOMATIC INFLOW.** A weir so arranged as to allow the sewage to flow into the proper sewer, but during a storm to direct the extra flow over its edge into a separate sewer; also called "storm weir," "leap weir," "automatic overflow," "automatic weir".

**AUTOMATIC SPRINKLER.** A contrivance in case of fire; it usually consists of a valve having a half-inch bore, and fastened to its seat by a small piece of alloy which is fusible at a temperature of 150 to 160° F. Should the heat of the atmosphere around the sprinkler rise to this point, the alloy melts and liberates the water in the pipes through the open valves.

**AUTOMATIC SYPHON.** A self-acting siphon used in tanks containing liquid, and so constructed that it will discharge the contents of the tank or vessel when full.

**AUTOMATIC TIDAL ARM.** A kind of valve taking the place of the ordinary tidal flap, penstock and similar valves for preventing sea, river or flood water entering sewers and drains. The outlet arm is made of galvanised iron fitted with an intermediate piece by a gun-metal swivel joint, and a strong galvanised iron float, with a brass plug in each end.

**AUXILIARY OR CUSHION RAFTER.** A term applied to the raking piece in a roof truss.

**AUXILIARY PUMPS.** Those that are used as a stand-by, and also started in case of an emergency.

**AVANTURINE.** A glittering variety of micaceous quartz; the artificial kind having been discovered by chance.

**AVANT MURE.** An outward wall.

**AVENUE.** A passage from one part of a building to another; an entrance or approach to a place; an alley planted with trees leading to a house; a wide street.

**AVEY TURINE GLASS.** Is usually of a brown transparent colour, generally made in slabs and sometimes used in mosaic figure work; it is of a sparkling kind, which is caused by the metallic particles or copper filings used in its manufacture.

**AVIARY.** An apartment or building for keeping birds.

**AVOLTA.** A place vaulted or arched over.

**AXAL SECTION.** A section through the axis of a body.

**AXE.** For hewing timber and chopping wood; is a tool with a long wooden handle, with an iron or steel head attached, with a cutting edge situated in a plane passing longitudinally through the handle; the axe used by the mason and bricklayer is somewhat similar in shape.

**AXED.** Pean-hammered or patent-hammered, is a method of dressing building stones; the patent hammer consists of a number of blades; the effect of axing is to cover the surface of the stone with chisel marks.

**AXED ARCH.** A brick arch in which the bricks are roughly cut to a radial form.

**AXED, FINE-AXED, DOUBLE-AXED.** Various ways of dressing granite to a plane but not smooth surface.

**AXE-HELVE.** The handle of an axe.

**AXES.** The timbers of a roof which form two sides of a triangle, the tie beam being the base; generally called principals.

**AXESTONE.** A light green material, used for making axes and other instruments.

**AXGATE OR OXGATE OF LAND.** Is generally understood to be fifteen acres; varies in some districts.

**AXIAL TOWER.** A tower between nave and chancel of a non-cruciform church.

**AXIS.** In Architecture, an imaginary line through the centre of a column, etc., or its geometrical representation.

**AXIS IN GEOMETRY.** The straight line in a plane figure, about which it revolves to produce or generate a solid; a straight line, real or imaginary, round which a body revolves.

**AXIS IN PERITROCHIO.** A wheel and axle; one of the five mechanical powers.

**AXIS OF A CIRCLE OR SPHERE.** Any line drawn through the centre and terminated at the circumference on both sides.

**AXIS OF A CONE.** Is a straight line drawn from its vertex to the centre of the base.

**AXIS OF A CYLINDER.** A perpendicular line through its centre from end to end.

**AXIS OF ROTATION OF ANY SOLID.** The line about which the body really revolves when it is put in motion.

**AXLE OR AXLE TREE.** A piece of timber or a bar of iron which passes through the centre of a wheel, and on which it revolves.

**AZURE.** Blue colour; in painting, a bright and florid tint of blue, equal in force to ultramarine with the addition of a little white.

## B.

**B.** On a lead pencil, denotes black; used for shading purposes, etc.

**B.B.** Denotes softer and very black.

**B.B.B.** Denotes extra soft and black.

**B.B.B.B.** Denotes softer still and very black.

**BABBITT'S METAL.** Consists of 4

parts copper, 8 parts zinc and 96 parts tin; generally used for bearings of machinery. It is very soft, wears smooth and reduces friction.

**BABYLONIAN ARCHITECTURE.** Is indebted to the magnificence and extent of the public buildings of Babylon, which was founded by Nimrod about 1665 years before Christ.

**BABYLONIAN ENGINE.** An engine used by the ancients to raise water from the Euphrates to supply the hanging gardens of Babylon.

**BAC.** A tub used in brewing and distilling.

**BACCA.** A lighthouse, watch-tower or beacon.

**BACK.** The back of a lode is the part of it nearest the surface; the back of a level is that part of the lode extending above it to within a short distance of the level above.

**BACK.** The upper side of an horizontal or inclined timber; the side opposite to the face or breast of any piece of architecture.

**BACK BOARD.** In turning, that part of the lathe which is sustained by the four legs and which sustains the pillars that support the puppet bar; the back board is only used in the first-class lathes.

**BACK BOXING.** A term applied in the north of England to the back lining of a cased sash frame.

**BACK CENTRE SCREW.** The screw for setting up the back centre of a lathe to the work to be turned after the puppet head has been fixed.

**BACK DOOR.** A back or private entrance; an indirect way.

**BACK FILLET.** The return to the face of a wall of the margin of a projecting quoin, such as in a plain architrave to an opening.

**BACK FLAP OR BACK FOLD.** Any of the leaves of a folding shutter except that by which it is hung to the frame.

**BACK FLAP, TABLE OR SHUTTER HINGES.** Are those which allow the leaves or flaps to be folded back against each other; they differ from an ordinary butt hinge in the leaves being almost square.

**BACKGROUND.** In painting, is the space of ground behind the principal objects of the picture; ground in the rear; a situation little seen or noticed.

**BACK HEARTH.** That part of the hearth which is within the opening for the grate; it covers the space between the jambs of the chimney breast.

**BACKING.** The term sometimes applied to the formations of the inner

edges of ribs, rafters, etc., for a lath and plaster ceiling.

**BACKING.** The inside surface of a wall; the stone or bricks which forms the back of the wall; the rubble or brickwork is usually used at the back of the wall, and the face built with ashlar; a strip of wood usually framed at right angles to the grounds.

**BACKINGS.** Cross pieces dovetailed between grounds and spiked to wood bricks to give a firm support to linings, etc.

**BACK JOINT.** A term applied by masons to a rebate such as that made on the inner side of the jamb of a chimney piece to receive a slip; also to the back joint of a step.

**BACK LININGS.** Are those at the back of a recess for folding shutters; also the part of the boxing of a cased frame opposite the pulley stile and next to the brick or stone work.

**BACK NUT.** A screwed iron nut for a wrought iron gas or water pipe.

**BACK NUT.** A nut on a bolt placed behind an ordinary nut to prevent it working loose; it is also called a "check nut" or "lock nut".

**BACK OF A CHIMNEY.** The recessed face of it toward the apartment.

**BACK OF A HANDRAIL.** Is the upper side of it.

**BACK OF A HIP.** Is the upper edge of it usually formed to an angle so as to range with the rafters on each side it.

**BACK OF A SLATE.** Is its upper surface.

**BACK OF A STONE.** The side (generally rough) opposite the face.

**BACK OF A WINDOW.** Is the board or wainscoting between the sash frame and the floor uniting with the two elbows and forming part of the finish of a room.

**BACK OVERFLOW GULLY.** A gully grate suitable for steep gradients, where large volumes of storm water have to be dealt with, or for streets in level districts paved with wood or asphalt, from which the rainfall rapidly drains. It is made with an open space at the back of the grating and inside the frame.

**BACK PAINTING.** The method or art of painting or staining mezzotint prints when pasted on glass so as to be like stained glass work.

**BACK PRESSURE or COUNTER PRESSURE.** Is the amount of pressure above the atmospheric line during the exhaust stroke. The back pressure counteracts the forward movement of the pistons and therefore should be avoided. On an indicator diagram it is found by allowing the instrument to trace the atmospheric line after tracing the diagram.

**BACK PRESSURE VALVE.** A valve of any type introduced in a pipe line, placed in such a position that the liquid, fluid, semifluid or gases, after having once passed through cannot return, as it closes automatically the moment the pressure which opens it has been relieved.

**BACK PUTTY.** The layer of putty put into the rebate of a sash, etc., before inserting the glass, and upon which the glass is bedded.

**BACK ROOM.** A room in the back part of a house.

**BACKS.** In carpentry, are the principal rafters of a roof; the upper side of any piece of timber is also termed the back, the lower or under side being called the breast.

**BACKS.** A term applied in quarrying to two partings or "backs".

**BACKS.** Large shallow tanks in which washed clay is left to settle in brickmaking.

**BACK SAW.** A saw whose web is stiffened by a metallic back of greater substance, as a tenon saw.

**BACK SETTLEMENT.** Outlying land that is being colonised and broken in.

**BACK SHAFT.** That part of a shaft bratticed off for an air shaft or pumping shaft.

**BACK SHUTTERS or BACK FLAPS.** Are additional breadths hinged to the front shutters, to enable them to be folded back when not in use.

**BACK STAIRS.** Back or private stairs.

**BACTERIA.** The lowest forms of life, as seen in the film covering

cloudy or dirty water, which contains, or has contained, organic matter either of animal or vegetable origin.

**BACTERIA BED.** Practically a water tank filled with material providing a good surface for bacterial growth, such as clinker, broken stone or brick, burnt clay, etc. If sewage is turned into a tank formed as above, bacteria will soon form upon the filling material, and exert their purifying action upon the sewage.

**BACTERIAL CONTACT BED.** A tank filled with some coarse material, such as clinker, etc. Sewage is run into it until it is full to the surface, and held for a short time, during which the aerobic organisms act upon the sewage. The sewage is then run off, and the bed allowed to stand empty while the air necessary to support the activity of the aerobes can get into it, when the sewage can be run in again and filtered.

**BACTERIOLOGY.** The science relating to bacteria.

**BACTERIOLYSIS.** A name given by W. Adeney to the analysis under "aerobic conditions" when complex solids are split up by combination with water, yielding simpler compounds, and converting the soluble organic substances into still more unstable compounds, and ultimately their complete revolution by water and oxygen into carbonic acid and ammonia.

**BACULITE.** A fossil shell, of an elongated conical form.

**BACULOMETRY.** The art of measuring distances or lines by the help of staves or rods.

**BACULUS.** A branch of the hazel tree, used for the discovery of springs, generally called a divining rod.

**BADGER SOFTENER.** A broad soft brush used by painters.

**BADIGEON.** A cement made of plaster and freestone sifted and ground together; used by statuary to fill up small holes and repair other defects in the material of their work; a mixture of sawdust and glue to repair defects in wood, such as shakes, etc.

**BAG OF GAS.** A cavity found occasionally in fiery seams of coal, containing highly compressed gas.

**BAGNETTE.** A small moulding of the astragal species, sometimes ornamented with laurels, ribands, pearls, etc., cut on it; it is then called a chaplet; when plain a head.

**BAGNIO.** A bathing house; an Italian term for a bath.

**BAGS.** A term applied to slates thirty-six inches by twenty-four inches.

**BAILE.** A wooden bar for separating two adjoining stalls of a stable from each other.

**BAILEY.** An area of ground; a court within the walls of a fortress; at the present time frequently applied to a prison, a courtyard.

**BAIT.** The arch-shaped support of a millstone.

**BAKEHOUSE.** A house or building for baking, having an apartment provided with an oven, kneading trough, etc.

**BAKERY.** A bakehouse.

**BALANCE CRANE.** A crane having two arms, one of which is provided with arrangements for counterpoising in whole or part the weight to be raised by the other.

**BALANCE GATE.** A flood gate in which the gate is divided into two uneven panels by a vertical shaft which works on a pivot. The pressure of the water against the larger panel of the gate closes it. To open it, a sluice is constructed in the larger panel portion, which upon being raised reduces the area of this side of the gate to less than that of the other, and the water acting upon that side of the gate forces it open.

**BALANCE GATES.** Used in reservoirs, etc.; differ in construction from common flood gates, being made to work upon a vertical shaft or spindle as a centre, and having an equal surface of gate on each side of that centre.

**BALANCED or DANCING STEPS.** Winders in which the nosings do not all converge to one point, so that the width of the tread at the narrow end is increased.

**BALANCIA.** A Greek term for a bath.

**BALANITE.** A fossil shell of the barnacle family.

**BALCON** (French term). Is a circular row of seats projecting beyond the tier of boxes immediately above the pit in a theatre.

**BALCONIED.** Having balconies.

**BALCONY.** A projecting gallery or platform provided with a railing parapet or balustrade, and supported usually by consoles, brackets, cantilevers or pillars, and projecting from the external wall of a house, usually in front of the building.

**BALDACHIN.** A canopy supported by columns, and raised over altars, tombs, etc.

**BALDACHINO.** An open building supported by columns and covered with a canopy; a canopy of various kinds, sometimes suspended from the roof.

**BALE TACK.** A strip of sheet lead nailed at one end and bent over a lead flashing to secure it.

**BALISTA.** In practical geometry, the same as the geometrical cross, called the Jacob's staff.

**BALISTRARIA.** A cross-shaped aperture in the wall of a fortress; a room in fortified buildings, in which the crossbows were deposited; a projecting turret to shoot from.

**BALK.** A roughly squared log of timber.

**BALK.** A large beam; a ridge of land left unploughed.

**BALK.** A trunk of a tree hewn square roughly with an axe or saw; a log of timber usually from twelve by twelve to eighteen by eighteen inches; also called dram, square timber, and sometimes spelt baulk.

**BALL.** Any spherical body, either natural or artificial.

**BALL AND POINT SWIVEL.** In gasfitting a joint for a bracket, etc., having the two arms at right angles to each other, so that the fixed arm for admitting the gas is vertical and the revolving arm horizontal.

**BALL AND SOCKET.** An instrument made usually of brass, with a universal screw, so as to move horizontally, vertically and obliquely, used in managing surveying instruments.

**BALL AND SOCKET JOINT.** A particular kind of joint, one part of which is shaped like a ball, and the other in which it moves is a hollow socket of the same diameter.

**BALLAST.** Consists of broken stone, gravel, etc., for making concrete, or forming common roads, etc.; on railways ballast is used to form a firm and dry foundation for the sleepers which carry the rails.

**BALL CASTER.** A caster with a revolving ball.

**BALL COCK.** A copper ball which floats on the surface of the water, used in connection with a lever to regulate the flow of water.

**BALL FLOWER.** An ornament like a ball placed in a circular flower, the three petals of which form a cup round it.

**BALLINGDON BRICKS.** Are extensively used for facings; they are made by Beart's process near Sudbury, Suffolk.

**BALLISTRARIA.** An opening shaped like a cross pierced in the wall of a turret.

**BALLIUM.** The open space or court of a fortified castle.

**BALL LEVER.** A lever of metal having a ball affixed at one end as a weight, which assists in closing again the plug or valve of a cistern, after it has been pulled up to obtain a supply of water.

**BALLON.** Is a round globe on the top of a pillar, cupola, column or pier by way of crowning it.

**BALLOON.** Any spherical hollow body; a globe placed on the top of a pillar or pediment, as an acroter or crowning.

**BALLOON or BASTON.** A mould at the base of a column called a tore.

**BALLS.** In electricity, are two pieces of cork or pith of elder tree, turned in a lathe to the size of a small pea, and suspended by means of delicate threads.

**BALLU.** The term applied to sand in India.

**BALNEUM.** A bath.

**BALTEUM.** The band or moulding encircling the cylindrical side of an Ionic capital; also called balteus.

**BALTEUS.** A wide step in theatres

and amphitheatres, etc., between several rows of seats, thus affording a passage round them without disturbing the sitters.

**BALTEI.** The bands in the flanks of Ionic pulvinated capitals.

**BALTIC DEAL.** Is either called red or yellow deal, which is simply the red fir timber (*Pinus sylvestris*) sawn, or else white deal which is prepared from white fir timber (*Abies excelsa*).

**BALTIC SPRUCE.** Is imported chiefly from Norway, Sweden, Russia and Prussia.

**BALTIMORE OAK.** Is of a reddish-brown colour; it is very weak (for oak) and soon decays.

**BALUSTER.** The lateral part of the volute of the Ionic capital, beneath the architrave; sometimes called "pulvinata" on account of its resemblance to a pillow; also called the baluster side.

**BALUSTER.** A slight turned post to support the handrail of a staircase or balcony; in masonry, a short column forming part of a balustrade.

**BALUSTER STRING.** In staircasing, a term sometimes applied to the string of a stair to distinguish it from the wall string.

**BALUSTRADE.** A parapet formed of a row of balusters capped by a rail; serving for a rest or support, or as a fence or enclosure to balconies, altars, staircases, etc.

**BANCALIA.** Cushions or coverings for seats and benches.

**BANCO.** A bench or a bank.

**BAND.** A square moulding; any flat low member or moulding broad but not deep; a flat face or fascia; a continuous tablet, or series of ornaments formed into a narrow band of panelling.

**BAND.** A north of England term for bond.

**BANDAGES.** The rings or chains of iron inserted in the corners of a stone wall or round the circumference of a tower, etc., which act as a tie on the walls to keep them together.

**BANDED COLUMN.** The cinctures sometimes used round the shafts of rusticated columns are called bands, hence the term banded columns.

**BANDED IMPORT.** That in which the sections above and below the import mouldings are alike.

**BANDELET or BANDLET.** A small band round a column; a small fillet or flat moulding.

**BANDING.** In glazing, fixing copper wire bands or ties to lights to secure to saddle bars.

**BANDLE.** An Irish measure of two feet in length.

**BANGIUM.** An outhouse or domestic office.

**BANISTER.** A corruption of baluster when applied to the railings of a staircase.

**BANK.** A long piece of timber.

**BANK.** A piece of fir-wood unsplit, from four to ten inches square and of any length.

**BANK.** A mound or ridge of earth or sand; a slope on the margin of a river or lake; an establishment which trades in money.

**BANK BILL.** A note, or a bill of exchange of a bank, payable at some future specified time.

**BANKER.** In bricklaying, a bench from six to twelve feet in length, used for preparing the bricks for gauged work; a bricklayer's or mason's bench.

**BANKER.** A rough platform on to which mortar is shovelled to keep it from the dirty ground.

**BANKER.** A rough bench, consisting sometimes of two or three stones piled up, or a barrel, tub, etc., used for working stones on, such as squaring or moulding them, etc.

**BANKER.** A cushion or covering for a seat.

**BANKER BROWDED.** Cushions embroidered.

**BANKER MASON or BANKER HAND.** The mason working at the banker; his work consists of squaring and finishing stones, working mouldings, rebates, etc.

**BANLIEUE.** The territory without the walls but within the legal limits of a town.

**BANQUET.** The footway of a bridge when raised above the carriage way; a foot bank behind a parapet, on which the besieged stand to fire upon the enemy.

**BANQUETING HALL.** A large apartment where feasts are given.

**BANQUETING HOUSE or ROOM.** A house or room where public feasts are held.

**BANTAM WORK.** Painted or carved work, resembling that of japan, only more gaudy.

**BAPTATERIUM.** A back mill or fulling mill.

**BAPTISMAL FONT.** A vessel raised above the ground for containing the holy water used in the administration of baptism.

**BAPTISTERY.** That part of a church in which baptism is performed; sometimes it is a separate building; a basin, pool or place for bathing.

**BAR.** A rod of wood, iron or other solid substance used as a lever, an axis, or an obstruction; any piece of wood or iron used for fastening doors, shutters, etc.

**BAR OF A SASH.** The light pieces of wood or iron which divide a window sash into spaces or compartments for the glass. See Angle Bar.

**BAR.** The railing about three or four feet high, and the enclosure in which the counsel have their places to plead causes in a court of justice; the place in a court at which criminals stand during their trial.

**BAR.** The enclosed place in a tavern, inn, etc., where liquors are served out.

**BAR.** A barrier, gatehouse; an ingot, lump, or wedge, from the mines, run into a mould and unwrought.

**BAR.** A north of England term for a ledge in joinery; hence a barred door is a ledged door.

**BAR.** An obstruction at the mouth of a river or a harbour.

**BARBACAN.** A long narrow canal or passage for water in Wales, where buildings are liable to be overflowed; likewise to drain off water from a terrace.

**BARBACAN or BARBICAN.** A fortification or defence to a town or castle outside the walls, generally in front of the gate or at the end of a drawbridge; an opening in the wall

of a fortress through which guns are levelled and fired.

**BARBADOES TAR.** A mineral tar.

**BARBERRY WOOD.** Is of small size resembling alder, and is straight and tenacious.

**BARBETTE.** A terrace inside a parapet so raised as to admit of the cannon being fired over the top.

**BARDIGLIONE.** A blue variety of anhydrite cut and polished for ornamental purposes.

**BARDON HILL STONE.** Obtained in Leicestershire, is chiefly used as a road metal in the Midland counties; a similar variety is also found in Cornwall, Argyllshire, etc.

**BARE-FACED TENON.** A tenon with only one shoulder.

**BARGE.** A north of England term applied to the projection of a chimney beyond a gable wall above the roof and over on to skew at hench of chimney.

**BARGE BOARD or VERGE BOARD.** An inclined projecting board, placed at the gable of a building, to conceal the horizontal timbers, laths, tiles, etc.; they are sometimes plain, but generally ornamented; pendants, pinnacles, and brackets, were the chief decorations of the barge boards in early domestic architecture.

**BARGE COUPLE.** Two beams mortised and tenoned together for the purpose of increasing the strength of the building.

**BARGE COURSE.** That part of the tiling of a roof which projects beyond the external face of the gable; a course of bricks on edge over tile or other creasing; the coping of a wall formed by a course of bricks set on edge.

**BARGE PUMP.** A light pump with a long suction tube to reach the bottom of a trench while being worked from the top.

**BARGH MASTER.** A surveyor of mines.

**BARGMOTE.** A court held concerning the affairs of mines.

**BARL.** The portion of a slate showing the gauge and on which the water falls.

**BAR IRON.** Wrought iron in bars.

**BARIUM.** A metal that exists in the sulphate and carbonate of barytes; found in nature in great abundance.

**BARKER'S MILL.** An hydraulic machine for grinding, which moves by the centrifugal force of water, so called from its inventor.

**BARKERY.** A tan-house; also applied to a sheep-cote.

**BARK HERT.** A seat in large gardens; a resting place.

**BAR MASTER.** Among miners, the person who keeps the gauge or dish for measuring the ore; a superintendent of mines.

**BARMKYN.** The rampart or outer fortification of a castle.

**BARN.** A covered farm-building for storing grain, hay, straw, etc.

**BARN DOOR.** The door of a barn.

**BARNETT'S LIQUID ASPHALTE.** Is composed of natural or artificial asphaltes mixed with powdered oxide of iron and a small quantity of mineral tar.

**BARING.** In stone quarrying, is the first operation or the removing of the top soil.

**BAR OF GROUND.** In mining, any course of vein which runs across a lode, or different from those in its vicinity.

**BAROMETER.** An instrument for measuring the pressure of the atmosphere, and so indicating changes of weather, as well as determining altitudes.

**BARONY.** A territorial division in Ireland.

**BAROQUE.** A design, the ornamentation of which is more lavish and showy than true and tasteful.

**BAROSELENITE.** Sulphate of baryta.

**BAR POSTS.** Are posts sunk in the ground to form the sides of a field gate.

**BARRA.** In the Middle Ages a tower or bar at one end of a bridge.

**BARRACKS.** A large building to lodge soldiers in.

**BARRAGE.** A mound or dyke to raise the waters of a river; a dam.

**BARRED DOOR.** Scotch term for a ledged door.

**BARREL.** In machinery, generally applied to anything hollow and cylindrical.

**BARREL BOLT.** A door bolt of circular section which slides in a continuous barrel.

**BARREL DRAIN.** One in the form of a hollow cylinder.

**BARREL OF THE CAR.** A French term applied to a cavity behind the tympanum.

**BARREL VAULT.** A cylindrical vault.

**BARROW.** A large mound of earth anciently raised over graves; in mining, a heap of dead attle, rubbish, etc.

**BARROW RUNS.** Are planks laid down to form a track for the wheelbarrow, in removing earth from excavations, etc.

**BARROWS or TUMULI.** Monuments of the greatest antiquity, raised as sepulchres for the interment of the great.

**BAR SHEAR.** A contrivance for cutting metal bars.

**BARTISAN.** A small overhanging turret at the angle of a building; a wooden tower; a turret on the top of a house, castle, or a church tower; a balcony or platform within a parapet on the roof of any building; sometimes spelt bartizan.

**BARTON.** An Anglo-Saxon term applied to the lands of a manor; the manor itself; the outhouses.

**BARTON HOUSE.** A term sometimes applied in the southern and western counties to farm buildings.

**BAR TRACERY.** Later Gothic tracery. Same as Plate Tracery, which see.

**BARWOOD.** A real dye wood obtained from Africa, in pieces four to five feet long.

**BARYCÆ or BARYCEPHALÆ.** Is the Greek name for an aræostyle temple.

**BARYTA.** An oxide of barium, the heaviest of the earths.

**BARYTES.** The sulphate of baryta; a heavy mineral found in copper mines, and formerly called "ponderous spar"; it is extremely poisonous and has a caustic alkaline taste.

**BASALT or PORPHYRY.** A rock of

igneous origin, often columnar, of a dark colour, and consisting chiefly of augite and felspar with grains of magnetic or titanite iron; it is too hard for ordinary building purposes; a stone, very abundant in Kent, called rag or ragstone is very similar to basalt; it is also found in Rowley Regis in Staffordshire where it is known as Rowley rag; also found at Portrush, Armagh, Antrim and Londonderry.

**BASALTINE.** A hornblende found in basalt and lavas; a column of basalt.

**BASANITE.** A variety of schistose hornstone, called also Lydian stone.

**BASCULE BRIDGE.** A bridge to lift up, to accommodate a passing for shipping.

**BASE.** A substance, generally a metallic oxide, such as white lead, forming the mass of a paint.

**BASE.** The foundation on which a thing stands or rests, such as the base of a pillar, wall, etc.; the lower part of a column on which the shaft rests, or is placed, or stands.

**BASE.** In the north of England, a skirting is described simply as a base if moulded, and as a "base plate" if square.

**BASE BED.** Is the term applied to the third and lowest good bed of Portland stone in the quarry; it is generally used for internal work, as it will not stand the weather.

**BASE COURT.** The back yard opposed to the chief court in front of a house or castle, generally appropriated to the stables, offices, etc.

**BASE LINE.** In perspective, the common section of a picture, and the geometrical plane.

**BASE LINE.** In surveying, a line, measured with the greatest possible exactness, on which a series of triangles are constructed in order to determine the position of objects and places.

**BASEMENT.** The lower storey or floor of a building; the storey or floor of a house below the level of the ground; in ordinary houses the lower storey is not called the basement unless partly below the surface of the ground; the lower storey even if

above the ground is called the base-ment if in its composition it serves as a pedestal or superstructure for the main order of architecture.

**BASE MOULDING** or **BASE TABLE**. A projecting moulding or a series of mouldings near the bottom of a wall, etc.; it is usually placed on the top of a plinth and sometimes a short distance above it.

**BASE OF A COLUMN**. The lowest part of the column supporting the scape or shaft; it gives the column, besides a broader foundation, a sort of girdling at the lower end of the shaft; it is suitable for slender and the more developed forms of columns.

**BASE OF A CONIC SECTION**. Is a right line in the parabola and hyperbola formed by the common intersection of the cutting plane and the base of the cone.

**BASE OF A FIGURE**. In geometry, denotes the lowest part of its perimeter.

**BASE PLATE**. The foundation plate of an engine; the lower or the base part of a skirting when it is made in two pieces; usually fitted together by a tongue and groove.

**BASIL**. The slope at the edge of a chisel, plane iron, etc., produced by grinding it; to grind the edge of a cutting tool to an angle; a smith's leather apron.

**BASILICA**. An oblong public hall among the Romans for the transaction of business and the administration of justice, with a semicircular recess at the end for the judges; a Christian church on the same plan; a structure over the grave of a royal person; the palace of a king.

**BASILICULA**. A shrine oratory or cenotaph.

**BASIN**. A reservoir for water; a canal; a pond; a hollow vessel to hold water; a dock for repairing ships.

**BASIS**. The lowest part of a column; the base or foundation of anything.

**BASKET**. A term applied to the vase of the Corinthian capital with its foliage, etc.

**BASKET, BASKETING**. Consists of removing earth, etc., in baskets,

from a place where a barrow cannot be used, such as up or down steps.

**BASKET HANDLE ARCH**. An arch whose vertical height is less than half its horizontal diameter, such as elliptic arch.

**BAS-RELIEF**. Low relief, when figures do not stand out far from the ground; also called *basso-relievo*.

**BAS-RELIEF** or **BAS-RELIEVO**. Low or flat relief, applied to sculpture when the figures project less than half their true proportion from the wall or surface on which they are carved.

**BASS**. The American linden tree, called also basswood.

**BASS** or **BAST**. A thin strand of bark or rush used by gardeners for covering plants; a kind of matting made from the lime or linden tree in Russia; used for packing purposes; a carpenter's tool-bag made of "bass".

**BASSE COUR**. A court or space intended in a house of importance for the stable, coach houses and servants required for the same; in country houses it is applied to the yard appropriated to the cattle, etc.

**BASSET** or **OUTFALL**. Applied to openings from or into mines to the surface.

**BASSORINE**. A substance obtained by treating certain gums with water, alcohol and ether.

**BASTARD FILE**. A file somewhat finer than a "rough" file.

**BASTARD FLAT**. A term used in painting when after the wall or ceiling has been flatted, a gloss is required, then more oil must be used in the colour; work done in this way is called bastard flat, and is less liable to get soiled than when only flatted.

**BASTARD ROACH, BASEBED ROACH, KERF** or **CURF**. Is a layer for Portland stone found below the layer of whitebed; it does not weather well.

**BASTARD STUCCO**. In plastering, consists of two-thirds of fine stuff to one-third of very fine clean sand, with a little hair added. This work is not hand floated, and the trowelling is done with less labour than trowelled stucco.

**BASTARD-TOOTHED FILE.** In smithing, that employed after the rubber.

**BASTARD TUCK POINTING.** Consists in forming a ridge from one-fourth to three-eighths wide on the stopping; the edges being cut parallel and clean; tuck pointing without the white lime.

**BASTARD WHEEL.** A flat bevel-wheel or one which is a near approach to a spur-wheel.

**BASTIDA.** In the twelfth century, a place of defence; a fortress.

**BASTILLE.** A prison; a castle, tower, fortress, or any place of defence.

**BASTILLE.** An old castle in Paris, long used as a state prison, and demolished by the enraged populace in 1789.

**BASTION.** A bulwark; earthen mound; rampart; or a tower projecting from the face of a fortification.

**BASTION.** An advanced work with two flanks and two faces, standing out from the angles of a rampart.

**BASTON or BASTOON.** A round moulding in the base of a column.

**BAT.** Half a brick when it is cut across; bats or brick bats generally mean half bricks; shale or bituminous shale.

**BAT.** Scotch term for a wedge or cramp; to caulk.

**BAT.** In the north of England is applied as follows: a "lead bat" is a lead wedge; an "iron bat" is a cramp to secure a door frame to masonry; to "bat" is to caulk.

**BAT or DRESSER.** Is a kind of mallet about eighteen inches long, and made of box or beech; used for dressing and bossing up sheet lead.

**BATARDEAN.** A cofferdam, or case of piling without a bottom, for building the piers of a bridge.

**BATEAU.** A pontoon.

**BATEMENT LIGHT.** A window in which the sides of the aperture are left to admit light, an upright, and the bottom horizontal.

**BATH.** An apartment or series of apartments for bathing; a bath-house; a vessel or the water in it for bathing.

**BATH BRICK.** A preparation of silicious earth in the form of a brick for cleaning and polishing metal.

**BATH METAL.** An alloy of brass and zinc sometimes called Prince's metal.

**BATH ROOM.** An apartment or small room provided with a bath for bathing.

**BATH STONE.** Is an oolite limestone; it is very soft when first quarried but becomes harder on exposure to the air; it is called after the name of the place where it is found.

**BATIFOLIUM.** A movable wooden tower used by besiegers in attacking a fortress.

**BATON.** A north of England term applied to a window bead.

**BATRACHITE.** A fossil-like batrachian; a mineral; a silicate of magnesia.

**BATS.** General refuse of broken bricks.

**BATS.** A term applied to the marks left on stone by the mason's chisel.

**BATSWING BURNER.** A gas burner from which the gas is emitted through a fine slit.

**BATTEN.** Is a piece of fir or pine seven inches broad and not more than four inches thick; a fillet of wood to which laths or boards are nailed. Called a "strap" in Scotland.

**BATTEN DOOR.** A door composed of vertical battens and held together by ledges.

**BATTEN DOOR.** A skeleton-framed door, the framing of which has been cut out of batten widths.

**BATTENED WALL or STRAPPED WALL.** Consists of wooden battens fixed vertically at intervals to receive the laths for plastering. Called a "stoothed wall" in Scotland.

**BATTEN ROD.** Scotch term for a stop bead or guard bead in a sash frame.

**BATTER.** Called by military men talus. A term applied to walls built out of the upright or gently sloping inwards; the slope of the surface; the amount of deviation from the perpendicular is the "amount of batter".

**BATTER.** A term applied to paste in the north of England.

**BATTERING RULES.** Are made of wood cut or formed to the curve or batter required, and fitted with a plumb rule.

**BATTERY.** In electricity, a combination of coated surfaces of glass, commonly called jars, so connected that they may be charged at once and discharged by means of a common conductor.

**BATTERY.** In electrotechnology, usually signifies a collection of primary or secondary cells. The term is also used with reference to condensers and Leyden jars.

**BATTLE-EMBATTLED.** Is when a wall has a double row of battlements formed by a conjunction of straight lines at right angles to each other, both, embrasures and merlons, being double, the lower part of every embrasure less than the upper part, and therefore the lower part of each merlon broader than the upper.

**BATTLEMENT.** A notched or indented parapet on the roof of a building; a parapet with openings or embrasures raised round the top of a building; used originally on fortifications; but in modern work it is intended for ornament only.

**BATTERY.** A name given by the Hanse Towns to their country houses and warehouses in foreign countries.

**BAULK.** Same as Balk.

**BAULK ROOFING or BALK ROOFING.** Is that in which the framing is constructed of balk timber.

**BAUSTER, BALUSTER SIDE.** See Bolster.

**BAVINS.** Faggots or bundles of brushwood; used as fuel in brick-clamps.

**BAWDRIK.** A cord or thong for the clapper of a bell.

**BAWK.** A term sometimes applied to a tie beam.

**BAY.** A principal compartment; a division of a roof, or vaulting of a building consisting of the space between the beams or arches; the architectural arrangement of a building marked either by the buttresses or pilaster on the walls; a part of a window between the mullions is

sometimes called a "bay" or "day," but the proper term is "light".

**BAY.** The division of a barn or other building; the term is more generally applied to denote the portion of a floor between two girders, or of a roof between two principals.

**BAY.** In plasterers' work, the space between the screeds prepared for regulating and working the floating rule.

**BAY.** A breadth of lathing, generally about two feet or three feet wide.

**BAY OAK** (*Quercus sessiliflora*, or cluster-fruited). Is a British oak, darker in colour, tougher, heavier, more flexible and harder than the Old English or stalk-fruited oak; it has but few large medullary rays; liable to warp, difficult to split.

**BAY OF JOISTS.** The joisting between two binding joists or between two girders when binding joists are not used.

**BAY OF ROOFING.** The small rafters and their supporting purlins between two principal rafters.

**BAY TREE.** A native of Italy and Greece, it grows to the height of thirty feet, and its wood is aromatic; a species of laurel.

**BAY WINDOW.** Frequently called a bow window; is a window forming a bay or recess in a room and projecting outwards, either semi-circular, polygonal or rectangular.

**BAYWOOD.** Is another name for Honduras mahogany; it is found about the Bay of Honduras in Central America; it is a common kind of mahogany and grows to a great size; it is very durable if well seasoned, takes a fine polish and is largely used for counter tops, doors, newels, etc.

**BAZAAR.** An exchange, marketplace, or place in the East, where goods of various kinds are exposed for sale; in Europe it is a spacious hall or suite of rooms fitted up with separate stalls for the sale of goods.

**BEACH.** A term for shingle in the south of England.

**BEAD.** A small moulding of circular section; it has usually a semi-circular section projecting from a flat surface.

**BEAD AND BUTT.** A term applied to a door, etc., the panels of which are flush with the framing and are finished each with a bead on the two opposite vertical edges.

**BEAD AND DOUBLE QUIRK.** Occurs when the bead is stuck, say, in the middle of a piece of stuff; or when the bead appears on the face and edge of a piece of stuff, in the same manner thus forming a double quirked bead; frequently called "return bead" or "angle bead".

**BEAD AND FLUSH.** Is a panel having beads stuck on each side of it, in the direction of the grain, a corresponding bead being planted on the two ends; the panel should finish flush with the framing.

**BEAD AND QUIRK.** A bead stuck on the edge of a piece of stuff, flush with its surface.

**BEAD, BUTT AND SQUARE WORK.** Consists of framing with bead and butt on one side and square on the other.

**BEAD, FLUSH AND SQUARE WORK.** Consists of framing with bead and flush on one side and square on the other.

**BEAK.** In architecture, a little pendent fillet left on the edge of the larmier, forming a channel behind to prevent the water from running down the lower bed of the cornice; sometimes formed by a groove or channel recessed on the soffit of the larmier upwards.

**BEAK.** The crooked end of a piece of iron to hold anything fast.

**BEAK HEAD OR CAT'S HEAD.** A term applied to an ornament used in Norman architecture in doorways, etc.; it resembles a head with a beak.

**BEAK IRON.** The conic part of the anvil with its base attached to the side and its axis horizontal.

**BEAKING JOINT.** The joint formed by the meeting of several heading joints in one continued line, which is sometimes the case in folded floors, generally called breaking joint.

**BEAM.** A horizontal piece of iron or timber, used to resist a force, or carry a weight; the chief names of beams are: tie beam, binding beam,

collar beam, straining beam, dragon beam, girdling beam and hammer beam.

**BEAM COMPASS.** Same as a Trammel.

**BEAM FILLING.** The brickwork or masonry brought up from the level of the under to the upper sides of beams; the filling up of the space from the top of the wall plate between the rafters to the under side of the slating, boarding, etc.

**BEAM GUDGEONS.** The bearings on the centre of the beam, or the central pivot upon which it vibrates.

**BEAM TREE.** A tree yielding a hard, tough wood for axle trees, etc.

**BEARER.** Is anything used by way of support to another weight.

**BEAREER.** In turning, that part of the lathe which supports the puppets.

**BEARERS.** The pieces on which the winders of a wooden stair are supported; the supports for a shelf or gutter board.

**BEARING.** The distance which the end of a beam goes into a wall.

**BEARING.** That part of a shaft or spindle which is in contact with the supports.

**BEARING.** In heraldry, the figures on a coat of arms; a coat of arms in general.

**BEARING.** A term used in describing a plaster figure copied from the antique. It generally implies that the drawing or outline of a figure has not the same bearings or angles of inclination as the original possesses.

**BEARING AREA OF RIVETS.** Is the diameter of each multiplied by the thickness of the plate (or plates) against which they bear in the same direction.

**BEARING BAR.** The iron bar for supporting the ends of a set of furnace bars.

**BEARING OF A TIMBER.** Is the distance in the clear of a beam or rafter which rests upon two opposite walls.

**BEARING PILE.** A pile driven down till it is firm enough to form a support for the superstructure; an ordinary pile used to sustain a vertical load.

**BEARING PLATE.** The upper plate of the heel strap for a principal which takes the ends of the strap.

**BEARING WALL or PARTITION.** Is a wall or partition built from the solid, for the purpose of supporting another wall or partition, either in the same or in a transverse direction; when the latter is built in the same direction as the supporting wall, it is said to have a "solid bearing"; it is said to have a "false bearing," or as many false bearings as there are intervals below the wall or partition, when built in a transverse direction.

**BEAT AWAY.** In mining, to excavate; usually applied to hard ground.

**BEATER.** A tool for mixing coarse stuff. Beart's patent bricks are made from gault clay at Arsley, near Hitchen.

**BEAUFET.** A cupboard or niche.

**BEAUFREY.** A beam or joist.

**BEAULIEU BRICKS.** Are those made on the Beaulieu River, near Southampton, from white clay.

**BEAUMONTAGUE or HARD STOPPING FOR WOOD.** Consists of shellac, resin, beeswax and the colouring pigment required.

**BEAUTY.** In architecture, consists of the following qualities: magnitude and strength, order and harmony, richness and simplicity; construction, in which the chief requisites are magnitude and strength, order and harmony; decoration, whose requisites are richness or simplicity, according to the nature of the composition.

**BECK.** A little river or brook.

**BECK.** An English weight containing sixteen English pounds, or two gallons.

**BECKET.** A rope with an eye at one end.

**BED.** The horizontal or inclined surface on which the stones, bricks or other matters in building lie; to "bed" is to lay in mortar or cement; usually applied to woodwork.

**BED.** In mining, a seam or horizontal vein of ore.

**BED.** A carefully made low mound of earth in which plants are grown.

**BED CHAMBER or BED ROOM.** The apartment destined to the reception of a bed; in Tudor times the furniture of these apartments, in great houses, was of the same gorgeous character as that in the chief rooms.

**BEDDED.** A timber such as a wall plate, etc., is said to be "bedded" when it is laid on a bed of mortar.

**BEDDED.** Plate glass in doors is sometimes "bedded" in wash leather, india-rubber, etc., to deaden concussion.

**BEDDERN.** A refectory.

**BEDE.** In mining, a kind of pick-axe used for separating the ores from the rocks in which they lie.

**BEDE HOUSE.** An hospital or almshouse where the poor prayed for their benefactors.

**BEDDING STONE.** A flat stone used for ascertaining whether the surface of a rubbed brick is a true plane.

**BED MOULDING.** In architecture, the mouldings beneath the corona or principal projecting member of a cornice; any small mouldings beneath a projection.

**BED OF A BRICK.** The horizontal surfaces as disposed in a wall.

**BED OF A SLATE.** Is its under surface.

**BEDS OF A STONE.** In cylindrical vaulting are the two surfaces intersecting the intrados of the vault, in lines parallel to the axis of the cylinder. In conic vaulting, where the axis is horizontal, the beds are those two surfaces which if produced would intersect the axis of the cone. In arching, the beds are called "summerings".

**BED PLUG.** A short dowel in the centre of the bed of a stone.

**BEECH** (*Fagus sylvatica*). Is found in England, Scotland, America, Australia and in the temperate parts of Europe; black, brown or white beech is all obtained from the same species of tree, the difference in the wood being caused by variety in soil and situation; the medullary rays are very distinctly marked, hard, fine grain, compact and smooth surface, durable if quite dry, or wholly submerged in water, but soon decays if

subject to alternate wet and dry ; it is of a whitish brown colour, but varies in shade according to the variety.

**BEEFWOOD.** Red coloured wood, generally applied to Botany Bay oak.

**BEEHIVE HOUSE.** A small ancient structure to be met with (sometimes in clusters) in Ireland and the west of Scotland, with a conical roof formed of long stones overlapping each other.

**BEER or BERE STONE.** Is composed chiefly of carbonate of lime, friable and with partial indurations ; it is extensively quarried at Bere or Beer in Devon.

**BEETLE or BOYTL.** A large heavy wooden hammer or mallet, with one or more handles, used for driving piles, stakes, etc.

**BEETLE or MAUL.** A large mallet to knock the corners of framed work together ; the handle is about three feet long.

**BELAYING PIN.** A pin or hook for securing the free end of a cord for opening or closing a ventilator or sash.

**BELFRY.** A bell tower or campanile, usually forming part of a church and containing the bells.

**BELL OF THE CORINTHIAN AND COMPOSITE CAPITALS.** Is the naked vase or corbel (its horizontal section is everywhere a circle) round which the foliage and volutes are arranged.

**BELL CAGE.** A timber frame, for carrying one or more large bells ; also called "belfry".

**BELL CANOPY.** A canopy containing a bell in harness.

**BELL CAST.** A slight concave curvature, sometimes given to a slated roof for the purpose of making the slates lie close to each other, to ensure tight joints at their tails. Called "break cast" in Scotland.

**BELL CHAMBER.** The room containing one or more large bells in harness.

**BELL COT.** A structure presenting the appearance of a steeple.

**BELL CRANK.** A bent lever used for changing a vertical into a horizontal motion.

**BELL GABLE.** In small churches and chapels a bell gable, having a plain or ornamental niche for the reception of one or more bells, is frequently used.

**BELL METAL.** An alloy composed of copper and tin, in the proportion of from three to one to five to one ; the metal after being cast is heated to redness and quenched, heated again, and allowed to cool slowly.

**BELL PULL or BELL ROPE.** The rope by which a bell is rung.

**BELL ROOF or OGEE ROOF.** Is one in which the vertical section perpendicular to the wall or its springing line is a curve of contrary flexure, being concave at the bottom and convex at the top.

**BELL SPRING.** A steel spring by which a house bell is carried.

**BELL TRAP.** A trap consisting of a hemispherical bell of metal, suspended from a circular grating and dipping into a circular trough of water.

**BELL TURRET.** A turret containing a bell.

**BELLY.** The hollow part of a circular or compass tint the round part of which is called the back.

**BELT.** A string course or a blocking course ; a course of stones projecting from a wall, and either moulded, plain, fluted or ornamented with pateras, etc.

**BELTING.** A method of placing iron bands round tall chimney shafts to strengthen them.

**BELT RAIL.** A term applied in the north of England to a lock rail.

**BELVEDERE.** A pavilion, turret, cupola, or a room built above the roof, for the purpose of obtaining a fine view ; a gallery in the Vatican which gives name to a famous statue of Apollo.

**BEMA.** A platform in the early Church represented by the modern pulpit, and railed off with a screen ; originally the judge's seat in a basilica and afterwards the site of the altar.

**BEMA.** An ambo or reading desk, a raised structure for the seat or throne of a bishop.

**BEMA.** The sanctuary, presbytery or chancel of a church.


**BEMA.** In Greek, the platform from which the orators spoke in the Athenæum.

**BEMA.** A bishop's throne.

**BENCH.** A horizontal surface or a heavy work table, about two feet eight high on which joiners prepare their work.

**BENCH.** A row of gas retorts.

**BENCH END.** The upright end of a church pew; called a "haffit" in Scotland.

**BENCH HOOK.** A piece of wood sawn thus, , or a pin affixed to the bench, used to prevent the stuff in working from sliding about on the bench.

**BENCHING.** The cutting of horizontal steps in trenches and inclined steps or notches down the face of a natural bank of earth before more is added, as at the back of a retaining wall.

**BENCH MARKS.** A mark at a known level made on the wall of a building for future reference.

**BENCH MARKS.** Marks left on a line of survey for reference at a future time.

**BENCH or BERM.** A term applied when it is necessary to form a foundation in steps at different levels; each of them is called a bench, and the foundation is said to be "benched out".

**BENCH PLANES.** The jack plane, trying plane and the smoothing plane.

**BENCH TABLE.** A stone seat next a wall or table; a low stone seat round the interior of the walls or round the bases of pillars in many churches; or in porches, cloisters, etc.

**BEND.** In mining, indurated clay; a name given by miners to any indurated argillaceous substance.

**BEND.** A bent or curved pipe in wrought iron pipes; this term is only used for quarter bends or those of 90° of curvature, those that are more obtuse being called "springs".

**BENDING MOMENT.** Is the algebraic sum of the forces acting on

a horizontal surface (*e.g.*, a beam) between a given point and one abutment, multiplied by their leverages to that point.

**BENDING OF TIMBER.** The process of bending wood to any required curve, depends on the property of heat employed, as its pressure increases the elasticity of the wood.

**BENDS.** In plumbing, are known as "easy bends," "sharp bends" and "square bends"; these terms are self-explanatory.

**BENDS.** Are curved lengths of drain pipes made to the required radii and bore; right-angled bends are called "quick," and those of less curvature "easy" or "slow"; a "quarter bend" is one having a curvature of 90° or quarter of a circle; an eighth bend is one having a curvature of 45° or one-eighth of a circle, likewise for a sixteenth bend.

**BENEFICE.** A church endowed with a revenue for the performance of divine service; an ecclesiastical living.

**BENETIER or BENATURA.** A vessel to contain holy water; a font or piscina.

**BEN HEYL.** A Cornish term signifying rich in tin.

**BENZINE.** The bicarburet of hydrogen produced by heating benzoic acid with lime.

**BERGAMO.** A coarse tapestry.

**BERGE.** A term applied in the north of England to an "apron" in plumbers' work.

**BERGERIES.** A French term for stables for sheep in abattoirs.

**BERGMANITE.** A mineral found in Norway; a variety of natrolite.

**BERGMASTER.** The bailiff or chief officer among the Derbyshire miners.

**BERLIN BLUE.** Prussian blue.

**BERLIN IRON.** Iron capable of a high degree of fluidity.

**BERLIN WAREHOUSE.** A warehouse for fancy goods.

**BERME or BERM.** A space of ground four or five feet in width left between the rampart and the moat or fosse; the slanting bank on the side opposite the towing path in canals.

**BERMOTE.** A court or meeting held on a hill in Derbyshire to decide controversies between the miners.

**BERNE MACHINE.** A machine, invented by Peter Sommer of Berne, for rooting up trees.

**BESSEMER.** A process for converting cast iron into steel by passing currents of air through it when molten, so named from H. Bessemer, the inventor.

**BESSEMER IRON.** Is a distinct variety of pig iron, made from hæmatite ores for conversion by the Bessemer process; it should be as free as possible from copper, sulphur, or phosphorus.

**BESSEMER'S GOLD PAINT.** Is a powder which is mixed with a little transparent varnish and laid on as required with a brush.

**BEST.** Applied to materials, articles and workmanship, implies that there is no superior quality of material or finish of the article in the market, and no better class of workmanship obtainable.

**BEST.** In the "slate world" a "best" slate has only reference to its combination of qualities—such as its straightness, uniformity in cleavage, its freedom from spots, etc. A "best" slate is produced by almost every quarry, but it does not necessarily follow that every quarry produces a "best" of equal merit. Also see Seconds.

**BEST BAR.** Is iron made by cutting up merchant bars, and repeating the process of piling, reheating and rolling; it is tougher and more easily worked than merchant bar; used for ordinary good work.

**BEST BEST OR BEST BEST BEST IRON BARS.** Are those which have respectively been submitted to three or four repetitions of the process of piling, welding and rolling.

**BEST BODY COPAL VARNISH.** Consists of fine African gum copal, and clarified oil, boiled very slowly for four or five hours till quite stringy and then mixed with turpentine.

**BEST PALE CARRIAGE COPAL VARNISH.** Consists of second sorted African copal and clarified oil boiled slowly together for four or

five hours until quite stringy, when turpentine, dried copperas, and litharge are added, strained and poured off.

**BEST SCRAP OR BEST BEST SCRAP IRON.** Is made from scraps of new and clean iron, useful for no other purpose, welded and rolled together with bars.

**BEST SIZED TONS.** Are slates from twenty-four inches to forty-two inches long and of various breadths, sold by the ton of twenty cwt.

**BEST TIMBER.** Is an architect's expression, which is interpreted in the trade to mean the best timber for the various purposes for which it is required.

**BEST YORKSHIRE IRON.** Is superior to any produced in England, and can be relied upon for strength, toughness and uniformity; it is generally used for high-class work subject to an unusual stress, or to resist sudden shocks or changes of temperature.

**BETHEL'S PATENT FOR PRESERVING WOOD.** Consists of thoroughly impregnating the wood with oil of tar containing creosote and a crude solution of acetate of iron; the patent was taken out in 1838.

**BETTY.** In mechanics, an instrument to break open doors.

**BÉTON.** The French term for concrete; concrete made with hydraulic lime or cement, or that made of large angular stones sometimes called grubb stone mortar.

**BEVEL.** Any angle except one of 90°; a sloped or canted surface resembling a chamfer or splay; an instrument used by masons, carpenters, etc., for laying off acute or oblique angles.

**BEVEL ANGLE.** Either an obtuse or an acute angle.

**BEVEL CUT SYSTEM.** In hand-railing, is the method of cutting the planks which form the wreaths; one end of the plank is raised until it is the same pitch as the stairs, it is then cut vertically to the required shape; in this system of hand-railing, all the joints are plumb when the rail is placed in its position.

**BEVEL GEAR.** In mechanics, wheelwork whose cogs stand beveling, or at oblique angles to the shaft.

**BEVELLED HALVING.** A halving in which the piece cut out leaves an acute angle.

**BEVELLED PLATE.** Plate glass having a bevel or chamfer round the edges.

**BEVELLING.** Slanting towards a level angle; bending from a right line; a hewing of timber with a slant towards a level angle; the slant or bevel of timber.

**BEVELMENT.** In mining, the replacement of an edge by two similar planes, equally inclined to the including faces or adjoining planes.

**BEVEL WHEEL.** A wheel having teeth formed so as to work at an angle either greater or less than half a right angle.

**BIBASIC.** In chemistry, the combining of a base in two different proportions.

**BIB COCK.** A term applied to a water tap or "cock" with a curved end; the end attached to the pipe is called the "shank" or "tail"; the "nose" is the end from which the water flows; the "plug" is that part which is turned round to shut off the water; if the upper end of the plug has a crosshead—*i.e.*, flattened out—it is said to have a "crutch key"; it is said to have a "screw bottom" when the lower end of the plug is secured with a screwed nut.

**BICARBONATE.** In chemistry, a carbonate containing two equivalents of carbonic acid to one of a base.

**BICE.** In painting, a pale blue colour procured by the reduction of salt to a fine powder; there are two varieties of this colour, a pale blue and a green.

**BICELLUM.** The dwelling of a tradesman, having under it two vaults, for the reception of merchandise.

**BICHOCA.** A turret or watch-tower.

**BICK IRON.** A kind of small anvil with pointed ends mounted on the top of a stout vertical bar.

**BIDDERY WARE.** A ware made at Bidar in India, and composed of copper, lead, tin and spelter.

**BIDEFORD BLACK** or **GRANT'S BLACK.** Is a mineral substance found near Bideford; it contains a large proportion of silicious matter; it has not much staining power, and is denser than lampblack.

**BIER.** A carriage or frame of wood for conveying the dead to the grave.

**BIER BALK.** A church road for burials.

**BIFORES.** According to Vitruvius, two single doors.

**BIFRONS.** In sculpture, double faced or fronted.

**BIGELF.** An arch or chamber.

**BIGG.** To build.

**BIGGER.** A builder.

**BIGHT.** The loop or coil of a rope; the double part of a rope when folded in contradistinction from the ends.

**BILGE.** The bulging part of a cask or barrel.

**BILL BOOK.** A book in which a formal entry of all bills accepted and received is made.

**BILL CHAMBER.** A department of the Scotch law court in constant session for the issue of edicts in urgent cases.

**BILLET.** A small log of wood.

**BILLET MOULDING.** A Norman moulding used in string courses and the archivolt of windows and doors; it is ornamented with two rows of blocks, the blocks in the upper row coming over the spaces in the lower row. The blocks may be either square or cylindrical.

**BILLIARD ROOM.** The apartment prepared for the reception of a billiard table, generally liberally supplied with light.

**BILLING.** In quantities, is bringing the quantities with their descriptions from the abstract, and arranging them in the form of a bill, as supplied to the builder.

**BILL OF CREDIT.** A document empowering another to receive money from a third party.

**BILL OF EXCHANGE.** An order drawn on a person at a distance,

requesting him to pay money to some person assigned by the drawer, in consideration of value received.

**BILL OF PARCELS.** An account of goods bought, with their prices given by the seller to the buyer; an invoice.

**BILLOT.** Gold or silver in the bar or mass.

**BIMEDIAL.** In geometry, the sum of two medials.

**BIMETALLIC.** Consisting of two metals.

**BIN.** A receptacle for corn, ashes or dust; a compartment in a wine cellar.

**BINARY.** In arithmetic, double.

**BIND.** The indurated clay of coal mines.

**BINDER OR BINDING JOIST.** A beam supporting the joists of a floor.

**BINDERS.** In a double floor or a framed floor, the timbers on which the joists rest. Rolled steel binders are now frequently used.

**BINDING JOISTS.** Are pieces of timber which are supported by the wall and by the girder; they run transverse to the latter to which they are secured.

**BIQUADRATIC.** In mathematics, the fourth power, arising from the multiplication of a square by itself.

**BIRCH.** Is a wood common to Europe and North America; it is of a light brown colour, compact and easily worked, used largely for turning.

**BIRD'S BEAK MOULDING.** A moulding resembling in profile a bird's beak; used in Grecian architecture.

**BIRD'S-EYE PERSPECTIVE.** Is of two kinds, angular and parallel; used in the drawings of extensive buildings having spacious courts and gardens; it gives the observer the idea that he is looking down on the building from a height.

**BIRD'S-EYE MAPLE.** A kind of spotted maple used chiefly for making furniture.

**BIRD'S MOUTH OR SALLY.** An interior acute angle formed on the end of an inclined timber, so that it may rest firmly upon the exterior angle of another timber.

**BIRHOMBOIDAL.** Having a surface composed of twelve rhombic faces.

**BIRMINGHAM WIRE GAUGE.** B.W.G. A measure of thickness now largely in use, particularly for wire and metal sheeting.

**BISECTION.** In geometry, the division of any quantity into two equal parts.

**BISEGMENT.** In geometry, one half of a bisected line.

**BISHOP.** A term applied in the north of England to a rammer for earth, made of a heavy cylindrical piece of wood with a cross handle near the top.

**BISMUTH.** A brittle yellowish or reddish-white metal; it is found native, crystallised in cakes, which generally contain small quantities of silver; it is also combined with oxygen, arsenic and sulphur.

**BISMUTHINE.** Native sulphuret of bismuth.

**BISMUTHITE.** Native carbonate of bismuth.

**BISPIA.** A bishopric or episcopal palace.

**BISTRE.** Is a brown pigment made from wood or peat soot.

**BISTURRES.** Small towers placed at intervals in the walls of a fortress, forming a barbican.

**BIT.** An instrument of various shapes and names, such as "twist bit," "centre bit," for boring holes in wood; the cutting part of a carpenter's plane.

**BITTERNUT WOOD.** Is obtained from America; it grows to a large size, measuring thirty inches when squared; plain and soft in grain like walnut.

**BITUMEN.** A name of various inflammable substances, such as naphtha, petroleum and asphalt, etc.

**BITUMEN.** A mineral pitch used in former ages instead of mortar.

**BITUMINOUS CEMENT.** A factitious substance, used for pavements, roofs, etc.

**BITUMINOUS LIMESTONE.** A limestone of a lamellar structure.

**BITUMINOUS PAINTS.** Are prepared from vegetable bitumen, asphalt and mineral pitches dis-

solved in paraffin, naphtha or petroleum, various oils and other substances; adapted for painting the inside of pipes, or iron work fixed under water.

**BIVAULTED.** A double vault; having two vaults or arches.

**BLACK.** When applied to wrought iron pipes, signifies that they are not galvanised.

**BLACK BAND.** A carbonaceous ironstone found chiefly in Staffordshire, Durham, North Wales, Lanarkshire and Ayrshire.

**BLACKBOARD.** A board painted black, used to write or draw upon for purposes of instruction.

**BLACK BOTANY BAY WOOD.** Is the hardest and most wasteful of all woods.

**BLACK BRICKS.** Are chiefly obtained from Cowbridge and Maidenhead.

**BLACK CHALK.** A mineral of a bluish-black colour; a variety of argillaceous slate.

**BLACK DYE.** The ingredients of black dye are logwood, Aleppo galls, verdigris and sulphate of iron, or green vitriol.

**BLACK FLUX.** A mixture of carbonate of potash and charcoal; used as a flux.

**BLACK IRON.** Malleable iron, in contradistinction to that which is tinned, called white iron.

**BLACK JACK.** A name given by miners to "blende".

**BLACK LEAD.** Plumbago, or graphite, is a native carburet of iron, or oxide of carbon, found principally at Borrodale in Cumberland.

**BLACK-LETTER.** Old English or modern Gothic.

**BLACK MARBLE.** The marble called Nero Antico and Egyptian black is the most beautiful black marble without any admixture of other colours; the chief quarries in England are at Ashford, Bakewell, Derby, etc.

**BLACK OCHRE.** A variety of the mineral black, combined with iron and alluvial clay.

**BLACK OXIDE OF IRON PAINT.** Is produced from the oxide obtained

as a by-product in making dyes; it is ground in oil with about fifteen per cent. of terra alba, Paris white or sulphate of baryta.

**BLACK SILVER.** A mineral consisting of silver, antimony and sulphur.

**BLACK STAIN.** Consists of boiling logwood in water and adding pearlsh; applied while hot; a second coat is applied consisting of boiling logwood in water and adding verdigris, copperas and rusty filings.

**BLACK TIN.** Tin ore when dressed, stamped and washed, ready for smelting.

**BLACK VARNISH FOR METAL WORK.** Consists of fusing Egyptian asphaltum, and, while liquid, adding shellac and turpentine.

**BLACK WADD.** One of the ores of manganese, used as a drying ingredient in paints.

**BLACK WALNUT STAIN.** Consists of a thin mixture of burnt umber ground in vinegar.

**BLACK WORK.** Iron wrought by blacksmiths.

**BLADE OF A CHISEL.** The iron or steel part of it as distinguished from the handle.

**BLADE OF A SAW.** The thin steel part on the edge of which the teeth are cut.

**BLADES.** The principal rafters, or backs or breaks of a roof.

**BLAENAVON PIG IRON.** Is a cold blast pig generally used for engine cylinders and other special work.

**BLANK.** A metal article in a preliminary stage, especially when shaped by stamping.

**BLANK DOOR.** A door either shut to prevent a passage or one placed in the back of a recess or elsewhere where there is no entrance, although having the appearance of a real door.

**BLANK KEY.** Is a key before the notches have been cut which enable it to fit the wards or levers of a lock.

**BLANK WINDOW.** Is one having the appearance of a real window, but is merely formed in the recess of the wall for the sake of uniformity.

**BLAST.** The air introduced into a furnace artificially; the explosion of gunpowder in splitting rocks, or of inflammable air in a mine.

**BLAST FURNACE.** A furnace for smelting by means of a steady blast of hot air.

**BLAZING.** Is a process of hardening saws and springs in oil, or in a mixture of oil with suet, wax, etc.; they are then heated over a fire till the grease inflames, after which the saw is flattened while warm and then ground.

**BLAZING.** Applied to small tools; after their being hardened in water they are coated with tallow and heated until the tallow begins to smoke when they are quenched in cold tallow.

**BLEEDING.** The practice of tapping a tree for the sake of the turpentine it contains. In the case of pitch pine this practice diminishes the elasticity, strength and durability of the timber.

**BLEND.** A mineral substance resembling lead.

**BLENDE.** The native sulphide of zinc; composed of iron, zinc, sulphur, silice and water; it emits a phosphoric light on being scratched.

**BLEOSTANING.** Mosaic pavement.

**BLIND AREA.** Same as Dry Area.

**BLIND HEADERS or SNAP HEADERS.** Are short stones or bricks that look like headers on the face but do not go deeper into the wall than the adjacent stretchers.

**BLIND STORY.** A term sometimes applied to the triforium as opposed to the clear-story.

**BLIND WALL.** A wall with no opening in it.

**BLIND WINDOW.** Same as Blank Window.

**BLISTER STEEL.** Is produced by placing bars of the purest wrought iron (generally Swedish iron) in a furnace between layers of charcoal powder and subjecting them to a high temperature, from about five to fourteen days according to the quality of steel required.

**BLOCK.** A thick piece of wood placed at the bottom of an architrave

to form a stop for it, and also the skirting.

**BLOCK or BLOCKING.** Small pieces of wood fitted, glued and fixed in the interior angle of two boards, etc., in order to give strength to the joint; which is then said to be "blocked"; called also "angle blocks".

**BLOCKHOUSE.** A small temporary fort constructed chiefly of log timber.

**BLOCK IN COURSE or BLOCKED COURSE.** Masonry composed of large squared blocks of stone having the beds and joints roughly dressed; it differs from ashlar in the smaller size of the stones and depth of the courses; chiefly "shoddies" or stones under twelve inches deep are used, the length of each stone being four or five times its depth; the courses consist of single stones only in depth, and no attention is paid to uniformity in the depth of the courses; chiefly used for engineering work, such as piers, abutments, etc.

**BLOCKING COURSE.** The course of masonry immediately above a cornice; also applied to a course of stone or brick forming a projecting line without mouldings at the base of a wall.

**BLOCK OF STONE or MARBLE.** A piece rough from the quarry before it is cut in any way.

**BLOCK PLANS.** Show the outline only of the intended buildings, and their position with regard to surrounding objects; they are drawn to a small scale and include the whole area of the site, showing existing boundary walls, sewers, gas and water mains, also all new walls, drains, waterpipes, etc.

**BLOCKS.** Pieces of wood in which the sheaves or pulleys run, and through which the ropes pass.

**BLOCKS and TACKLE.** An arrangement of blocks and ropes for lifting a weight.

**BLOCK TIN.** Tin cast into blocks or ingots; tin plate with an extra thick coating of tin.

**BLOMARY.** The first forge through which iron passes after it is smelted from the ore.

**BLOOD-RED HEAT.** That degree of heat which is only necessary to reduce the protuberances on coarse iron by the hammer, in order to prepare it for the file, the iron being previously brought to the required shape; this heat is also used for "letting down" moulding machine irons to enable them to be filed.

**BLOOM.** Is a slab, lump or ball of iron formed in the puddling furnace and placed under the helve, or a tilt hammer, the blows of which force out the cinder and consolidate and weld the particles of iron together.

**BLOOM.** The term applied to the yellow and purple hue seen in solder.

**BLOOM.** In ironworks, is in form a square piece two feet long.

**BLOW.** This term is applied in plasterers' work to the blisters or holes caused by the staking of some of the particles of lime after the work is finished; if stone or lias limes are used for plastering it is liable to "blow".

**BLOWER.** In mining, a smelter.

**BLOWER.** An iron shutter for partly or wholly closing the space between the top bar of a grate and the top of the opening of the chimney.

**BLOWING.** The projection of air into a furnace, in a strong and rapid current, for the purpose of increasing combustion.

**BLOWN JOINT.** Is a method of joining the ends of lead pipes by the aid of a blow pipe.

**BLOWN PLATE OR PATENT PLATE GLASS.** Is made by polishing sheet glass on both sides; it can be distinguished from British plate glass by the bubbles which are elongated and irregular; the surface is also more wavy than that of British plate, the bubbles in which are circular.

**BLOW-OFF COCK.** The stop cock in the blow-off pipe.

**BLOW-OFF PIPE.** The pipe fixed to the bottom of a boiler, for discharging the sediment.

**BLOW PIPE.** A bent pipe or tube for the purpose of directing a jet of air from the mouth of the operator

through a flame on any object to be heated; used by plumbers.

**BLUE.** A primary colour of various shades; one of the seven primitive colours of the rays of light, into which they are divided when refracted through a glass prism.

**BLUE AND BLACK POINTING.** Is that in which the mortar used is mixed with ashes instead of sand.

**BLUE BLACK.** Is a well-burnt levigated charcoal, of a cool neutral colour, and not differing from the common Frankfort black.

**BLUE BLACK.** Of the best quality is made from vine twigs; the inferior qualities are often produced from other woods charred and reduced to a powder.

**BLUE CARMINE.** Is a blue oxide of molybdena.

**BLUE JOHN.** A term applied by Derbyshire miners to fluor-spar.

**BLUE LIAS LIME.** An hydraulic lime made from the lias of the lias formation.

**BLUE OCHRE.** Is a natural coloured clay of rare occurrence; found with iron pyrites in Cornwall, and also in North America.

**BLUE PIGMENTS.** On account of the slight differences in its manufacture, which cause considerable variation in tint and colour, are known as Berlin blue, Chinese blue, Antwerp blue, Haarlem blue, etc.

**BLUE STAFFORDS.** Are bricks used generally for important work, such as heavy foundations, copings, quoins, paving, etc.; they are strong, durable, non-absorptive and unaffected by the weather; they are made from various clays and marls containing about seven to ten per cent. of iron. Imitation blue Staffords have only a surface wash of iron to give an outside colour, when broken they are red inside.

**BLUE STONE.** Sulphate of copper.

**BLUE VERDITER.** Is a blue oxide of copper, or precipitate of the nitrate of copper by lime.

**BLUE VITRIOL.** Sulphate of copper.

**BOARD.** Is a piece of timber not more than two inches thick or not less than five-eighths and any width

from eleven inches to two feet or more; the term applied also to battens, deals and planks under three inches thick.

**BOARDED FLOORS.** Those covered with floor boards.

**BOARDING FOR SLATING.** That nailed to the rafters for the reception of the slates.

**BOARDING JOISTS.** Those joists in naked flooring to which the floor boards are fixed.

**BOARDING LUFFER OR LEVER BOARDING.** See LOUVRE.

**BOARDS LISTED CLEAR OF SAP.** Are those such as are reduced in their width by taking off the sap from the sides.

**BOASTED WORK OR DROVED WORK.** Consists of a regular description of chiselling, in which the marks of the tool run in parallel lines, each successive stroke being made beneath the last, down the whole length of the stone, and repeated until the whole surface is covered.

**BOAST OR BOASTING IN SCULPTURE OR CARVING.** Is the rough cutting of a piece of stone or wood, to shape it out to the simple form required, leaving the smaller details to be completed afterwards.

**BOASTER.** Is a chisel from one and a half to three inches wide used by masons for dressing stone down to smooth faces, or cleaning and finishing mouldings, etc.

**BOASTING IN MASONRY.** The act of paring the stone with a boaster and mallet, but not in uniform lines.

**BOAT HOUSE.** A kind of shed to shelter boats; it is sometimes very elaborate.

**BOCATORIUM.** Anciently a slaughter-house.

**BODIUM.** A crypt or subterranean chapel.

**BODMER'S BRICKS.** Are made from a kind of fine concrete, composed of selenitic lime, cement, furnace slag, etc.

**BODY.** A term applied by painters to the opacity of a paint as measured by its power of concealing the surface over which it is spread.

**BODY.** Cherry or hard bricks are the best bricks in the kiln and are

those taken from the interior of the pile.

**BODY OR SOLID.** In geometry, has three dimensions, length, breadth and thickness.

**BODY COLOUR.** A pigment possessing consistence, body and tinging power; pigment laid on thickly and mixed with white.

**BODY OF A CAPITAL.** Is in the Ionic order of architecture a swelling enlargement of the column, on which is placed a heading of hanging ornament which seems to press forward in an elastic manner.

**BODY OF A NICHE.** That part of it whose superficies is vertical; when the lower part of a niche is cylindrical and the upper spherical, the former is called the body of the niche, and the latter the head.

**BODY OF A ROOM.** The main part, independent of any recesses on the ends or sides.

**BODY RANGE OF A GROIN.** The wider of two vaults which intersect and form a groin.

**BOG.** A marsh; wet marshy land.

**BOG EARTH.** An earth composed of sand and a portion of decomposed vegetable fibre.

**BOG IRON ORE.** An iron ore found in boggy land.

**BOILED LINSEED OIL OR DRYING OIL.** Is produced by heating raw oil with certain driers, or by passing a current of air through raw oil; it is darker, thicker and more apt to clog than the raw oil; generally used for outside work, as its rapidity in drying and greater body make it a quicker and more efficient protection.

**BOILER.** A wrought iron vessel containing water, to which heat is applied for the generation of steam.

**BOILER HORSE-POWER AND ENGINE HORSE-POWER.** These terms are often misunderstood. "Horse-power" has a definite meaning in each instance, but whilst a 100 h.p. boiler may supply sufficient steam for a 200 h.p. compound condensing engine of best make with Corliss valve gear, it may only be able to provide steam for a 50 or 75 h.p. engine of the old style with a plain slide valve. In each case the boiler

would be delivering the same amount of steam and be running at its normal rating of 100 h.p. An engine horse-power means work to the amount of 33,000 foot pounds per minute, while a boiler horse-power means steam to the amount of 30 lb. per hour at a pressure of 70 lb. per square inch, and from a feed water temperature of 100° F. The amount of heat required to evaporate 30 lb. of water into steam under the above conditions is the same as that required to evaporate 34.5 lb. from a temperature of 212° F. into steam at atmosphere pressure, which is  $34.5 \times 966 = 33,327$  heat units, which for practical purposes is commonly taken as 33,000. The fact that 33,000 foot-pounds of work per minute represent an engine horse-power, and 33,000 heat units per hour a boiler horse-power, often leads to confusion.

**BOILER PRESSURE.** Is the pressure above atmosphere, or the pressure as shown by a correct steam gauge.

**BOILER SCREW.** A short piece of brass pipe screwed at the end, and having a shoulder and nut; used for connecting a pipe to a boiler or cistern.

**BOLE.** A friable clayey earth tinged with peroxide of iron; a bisilicate of alumina.

**BOLECTION MOULDING.** A moulding running round a panel and projecting beyond the surface of the framing.

**BOLLING.** A tree with top and branches cut off.

**BOLOGNIAN STONE.** Is derived from sulphate of baryta by calcination and exposure to the rays of the sun.

**BOLSTER.** The baluster part of the Ionic capital on the return side; also termed the "pillow".

**BOLSTER.** In timber bridges a similar work, or short horizontal piece of timber on the top of a pile or post.

**BOLSTER.** A tool used for punching holes and for making bolts.

**BOLT.** A stout pin of iron or other metal for a fastening for a door; it

slides in a kind of socket and catches in a staple or notch to receive it.

**BOLT.** A square or cylindrical piece of iron with a knob at one end and a screw at the other, with a nut fitted to it, used for fastening heavy timbers together.

**BOLT.** The movable part of a lock which is actuated by the key or handle; a tool used for soldering, having the end made of copper; also called a bit.

**BOLT AND FEATHERS.** Same as Gibs and Cotters.

**BOLT AUGER.** An auger of large size.

**BOLTEL.** See Boultime.

**BOLTONITE.** A granular mineral.

**BOND.** In bricklaying and masonry, the method of constructing brickwork or walling, so as to form a coherent mass. There are several kinds of bonds; in brickwork they are, English bond, Flemish bond, broken bond, herring-bone bond, double herring-bone bond, garden wall or modified English; the bonds in walling are rubble or random bond, coursed rubble, ashlar, square or irregular snecked rubble.

**BOND.** In carpentry, fastening two or more pieces together, either tenoned, mortised, or dovetailed.

**BOND BLOCK.** In an arch, a block of brickwork laid all headers for the purpose of connecting the several rings of brickwork together.

**BONDERS.** Bond stones or binding stones, are stones which reach a considerable distance into and sometimes entirely through a wall for the purpose of binding it together; they are generally used in ashlar work.

**BONDING BRICKS.** Are bricks specially made for uniting the opposite sides of hollow walls.

**BONDING TIE or BOND.** Same as Wall Tie.

**BOND OF A SLATE.** Is the extent to which the joints in one course are covered by the course above; the bond being termed "true" when in all cases a joint occurs below the centre of the covering slate.

**BONDSTONE or BONDER.** A large stone used to bond the coping of a

gable to the rest of the wall ; it generally has a short length of coping worked on it ; this term is sometimes applied in masonry to an ordinary header.

**BOND TIMBER.** A piece of timber built into a brick or stone wall, to give it longitudinal strength.

**BONE BLACK.** Is produced by calcining bones in close vessels, and then ground ; it is inferior to ivory black.

**BONE BROWN AND IVORY BROWN.** Is produced by torrefying or roasting bone and ivory, till, by partial charring, they become of a brown colour throughout.

**BONE EARTH.** The earthy residuum of bones.

**BONING.** The act or art of making or judging a plane surface by the guidance of the eye, or of setting objects in the same plane or line by the eye ; it is performed by joiners with two short straight edges (called "boning strips" or "winding strips") ; surveyors generally use "boning rods" or "boning poles" which are set up at certain distances in the ground.

**BONING PEGS.** Are small cubes of any hard wood, about two inches square, wrought perfectly true ; used by masons in forming a plane surface on large stones.

**BONING ROD.** A rod with a cross head at the top, in form like a T, generally used in sets of three, by looking over the top of which it can be ascertained whether any three points are in the same straight or level lines.

**BONNET.** The cast-iron plates which cover the openings in the valve chambers of a pump.

**BONNEY.** In mining, a distinct bed of ore that communicates with no vein.

**BOOM.** The top or bottom horizontal member of a trussed girder ; the flange of a girder.

**BOOR.** A parlour, bed-chamber or inner room.

**BOOSTER.** (American.) A device whereby the pressure of one or more of a number of mains connected to a common generator is varied inde-

pendently of the remainder of the mains ; it may be used to increase the pressure, as in lighting and outgoing feeders for tramways, or to diminish it as in return feeders for tramways. In the latter case it is known as a "negative booster". The apparatus employed may be a battery or an independent generator, or, as is most usual, a motor driven generator (motor generator) or a transformer. In the last case the primary circuit is usually excited from the main itself. Boosters may be used either with continuous or alternating current.

**BOOT.** A vertical pipe with a bend at the lower end for discharging water.

**BOOTH.** A temporary erection built of slight materials, for shade or shelter ; or a wooden building for itinerant players and pedlars.

**BORAX.** In chemistry, a salt in appearance like crystals of alum ; an artificial salt used for soldering metals.

**BORCER.** An instrument of iron, steel pointed ; used to bore holes in rocks for blasting.

**BORD.** Anciently, a cottage.

**BORDERS.** For wallpapers are generally sold in pieces containing twelve yards, known in the trade as "dozens".

**BORE.** The internal diameter of a pipe ; the act or operation of perforating a solid body ; this term is generally restricted to wood, as metal is said to be "drilled".

**BOREHOLE.** A deep excavation of small diameter sunk by special tools for experimental purposes or when ordinary well sinking becomes impossible.

**BORNITE.** A tellurite of bismuth ; a copper ore.

**Boss.** A wooden vessel used by bricklayers' labourers for the mortar used in tiling ; it is provided with an iron hook, by which it hangs on the laths or ladder.

**Boss.** In Gothic architecture, is a projecting ornament placed at the intersection of two groins, or ribs, of ceilings ; also used as a termination to weather mouldings of doors,

windows, etc.; principally used in vaulted ceilings.

**BOSS.** A sculptured keystone or carved piece of wood, or moulded plaster, used in Gothic roofs; "boss" in plumbing is the same as "turning pin".

**BOSSAGE.** Projecting stones laid rough in building, to be afterwards cut into mouldings or carved.

**BOSSAGE.** Rustic stone work having indentures or channels left at the joints, these indentures or channels are sometimes bevelled, chamfered or circular.

**BOSSAGE.** Same as Boasting for Carving.

**BOSSED UP.** A term applied to the method of dressing the ends of a lead roll or gutter.

**BOSS HEAD.** A term applied in the north of England to a box staple.

**BOSSING IRON.** Same as Soldering Iron.

**BOSSING Mallet.** A mallet used by plumbers consisting of a short cylinder of wood attached to a handle.

**BOSSY.** Containing a boss; ornamented with bosses.

**BOSQUET.** A French expression for a piece of ground in gardens, enclosed by a palisade or high hedgerow of trees, etc.

**BOTANY BAY OAK.** Resembles in colour full red mahogany; chiefly used for turnery, etc.

**BOTRYOID, BOTRYOIDAL.** Having the form of a bunch of grapes.

**BOTRYOLITE.** Salt of lime, occurring in botryoidal forms.

**BOTTLE GLASS.** A composition of sand and lime, clay, and alkaline ashes of any kind.

**BOTTLE GREEN.** Of the colour of bottle glass.

**BOTTLE-NOSE DRIP.** Is lead dressed over a rounded edge to form a drip.

**BOTTLE-NOSED STEP.** A step with a rounded nosing.

**BOTTLE NOSING.** Same as Rounded Nosing.

**BOTTLE TRAP.** A trap shaped like a bottle, consisting of a hollow cylinder with an outlet at the side;

the inlet consists of a vertical pipe which dips into the water in the cylinder.

**BOTTOM CAPTAIN.** A superintendent over the miners in the bottoms.

**BOTTOM HEAT.** Artificial temperature produced in hothouses.

**BOTTOMING or PINNING.** The foundation of a macadamised road.

**BOTTOM LIFT.** In mining, the deepest or bottom tier of pumps.

**BOTTOM RAIL.** The lowest rail of a door, sash, etc.

**BOTTOMS.** In mining, the deepest working parts of a mine, wrought either by sloping, driving or otherwise breaking the lode.

**BOTTOMS IN FORK.** A term applied in Cornwall when all the bottoms are unwatered, when they are said to be in "fork"; the act of drawing the water from the bottoms, or any dipper, is known as "forking the water".

**BOTTONY.** In heraldry, a cross which terminates at each end in three buds, knobs or buttons.

**BOUDOIR.** A small retiring room; a lady's private apartment.

**BOULDER.** A large stone worn roundish by water; a mass of more or less rounded rock that has been transported to a distance from its native bed.

**BOULDER WALLS.** Are those generally built of round flints or pebbles laid in strong mortar.

**BOULTINE or BOLTEL.** In architecture, a convex moulding; a quarter round moulding such as an ovolo.

**BOUND.** A north of England term signifying framed in panels, such as a door, etc.

**BOUND or BOND MASONRY.** Is that in which the stones of each succeeding course are laid so that the joint which mounts and separates two stones always falls directly over the middle of the stone below.

**BOUNDS.** In mining, signifies the right to tin ore over a given district.

**BOURNONITE.** An antimonial sulphuret of lead.

**BOURSE.** An exchange, or public edifice for the assemblage of merchants to transact business.

**BOUTANT.** In architecture, an arc-boutant is an arch or buttress, serving to sustain a vault, and which is itself sustained by some strong wall or massive pile.

**BOUVERIE.** A French term for a stable for oxen in abattoirs.

**BOVA.** Anciently, a wine cellar.

**BOVEY COAL.** A species of bituminous coal; wood coal found at Bovey in Devon.

**Bow.** The handle of a door key.

**Bow.** Is that part of any building which projects from a straight wall; such as bow or bay windows.

**Bow.** A beam of wood or brass with three long screws that direct a lath of wood or steel to draw flat arches of large radius.

**Bow.** Anciently, an arch or gateway.

**BOW COMPASSES.** Are those in which one leg slides in a curved plate of metal, which is riveted into the other; used for describing small circles; also applied to an instrument for bending a lath of wood or steel into an arch.

**BOW DRILL.** A drill worked by means of a string attached to a curved piece of elastic wood.

**BOW AND STRING BEAM.** A beam so trussed that the tendency of the straight part to sag when loaded is counteracted to some extent by the tension upon its two ends, by a bow of wood or metal attached to those extremities. Same as Trussed Girder.

**BOW AND STRING BRIDGE** or **BOWSTRING** or **TENSION BRIDGE.** Is that in which the horizontal thrust of the arch or trussed beam is resisted by means of a horizontal tie attached as nearly as possible to the chord line of the arch.

**BOW AND STRING GIRDER.** A wrought iron bow and string girder, patented by Mr. G. Nasmyth.

**Bow KEY.** The head of the plug of a stop-cock is so called when it is shaped in the form of a ring.

**Bow Room.** A room having a bow on one or more sides of it.

**Bow SAW.** A flexible saw secured in a wooden frame stretched by means of a string; used by joiners for cutting curves.

**Bow SUSPENSION TRUSS.** The chief feature in this roof truss is an arched beam, the ends being kept from spreading by a tie beam.

**Bow TOPS.** A term applied in iron railings when the bars are connected at the top in  $\cap$  form.

**BOWER.** The Anglo-Saxon term applied to a small enriched chamber for ladies; a private room or parlour in ancient castles and mansions; a shelter made with boughs of trees.

**BOWERIC.** In the East Indies a well descended by steps.

**BOWL.** A round hollow; the hollow part of anything; a money bowl.

**BOWPEN.** A metallic ruling pen having the part which holds the ink bowed out toward the middle.

**BOWTEL.** The shaft of a clustered pillar, or a shaft attached to the jambs of a door or window.

**Bow WINDOW.** A rounded bay window.

**Box.** Generally a case of any size and material for containing anything.

**Box CULVERT.** Consists of vertical side walls of masonry with flag stones on top from one wall to the other.

**Box DRAIN.** An underground drain of brick or stone and of a rectangular section.

**BOXED SHUTTERS.** The boxings of a window; the cases opposite each other on each side of a window, into which the shutters are folded or fall back.

**Box ELDER.** The ash-leaved maple.

**Box GIRDER.** Is a hollow girder of wrought iron, formed by riveting iron plates and angle pieces together; they are generally used when the depth of girder is required to be over twelve inches and of a long span.

**Box GROUND.** Is a coarse but sound stone found in beds from ten inches to four and five feet thick; it is free from vents and somewhat harder than Combe Down; weathers well except by the sea or in a smoky atmosphere.

**Box GUTTER.** A trough gutter.

**Box HORSE or HORSE.** Is a wooden support for barrow runs when on an incline; they are generally made from one and a half to three feet square out of eleven by three planking; they are similar to a box without a top or bottom and have a diagonal strut inside to strengthen them.

**BOXING.** The recess into which folding shutters fit when not in use.

**BOXING or UPPER BALLAST.** Is the ballast from six to nine inches deep packed round sleepers, rails, etc., up to within two or three inches of the top; used in railways.

**Box KEY.** A handle for turning a valve, shaped like a T with a socket at the lower end which fits the head of the valve.

**Box of a THEATRE.** One of the subdivisions in the tiers round the circle.

**Box STAPLE.** The iron box into which the bolt of a rim or dead lock is slid when it is locked.

**Box WOOD.** Is of a yellow colour inclining to orange; it has practically no grain; used chiefly for tool handles, rules, etc.; obtained in England and several parts of Europe.

**BOYAU.** A connecting ditch covered with a parapet.

**BOZIGA.** Anciently, a house or dwelling.

**BRACE.** In timber framing, is a diagonal stay used to prevent distortion; when a brace is used by way of support to a rafter it is called a "strut"; a tool used for boring or drilling.

**BRACE.** This term is applied to the diagonal poles lashed to the standards of a scaffold to stiffen it.

**BRACED ARCH TYPE.** A steel arch with cross bracing in the spandrels.

**BRACED GIRDER.** A girder whose top and bottom horizontal members are connected by diagonal or vertical pieces termed "braces" instead of by a web.

**BRACK.** In the timber trade, signifies anything rejected from that which is, after such rejection, of superior quality; so far as deals are concerned a "brack" is an unmerchantable deal and must be sold at a greatly reduced price.

**BRACKED.** Is a term applied by timber merchants to the sorting of timber.

**BRACKET.** An angular supporting piece for a shelf, etc. See Skeleton Bracket.

**BRACKET.** In architecture, is an ornamental projection from the face of a wall to support a statue, etc., they are frequently found at the east end of the chancel and aisles of churches.

**BRACKET.** A gas pipe projecting from the wall and provided with a burner.

**BRACKETED STAIR.** A stair with ornamental brackets fixed on the outer or cut string at the return end of each step; rough vertical pieces are also fixed under each step and secured to the carriages, to give additional strength in good work.

**BRACKETS FOR STAIRS.** Are ornamental brackets about three-eighths thick, placed under the return ends of the treads in open string stair, or, as they are sometimes called, "bracketed stair".

**BRACKETING FOR CORNICES.** Are wooden ribs nailed to the ceiling joists and battening; the ribs are placed at intervals along the walls and lathed to sustain the plaster in which the mouldings are run; only used for very large cornices.

**BRAD-AWL.** A small boring tool for wood; its handle is of wood generally in the shape of the frustum of a cone tapering downwards; the steel part is also conical but slightly tapering upwards, the cutting edge at its point is formed by the meeting of two basils ground equally from each side.

**BRADS.** Of the lighter varieties, are known as joiners' brads and cabinet brads; they are flat-sided nails, either cut or wrought with heads of the shape known as "billed," i.e., the head projects from the shank on one side only, which, when driven with the flat sides parallel to the grain, is not liable to split the wood; the heavy varieties of brads are known as "flooring brads".

**BRAKE WHEEL.** The wheel acted upon by a brake.

**BRAMLEY FALL STONE.** A sandstone of the millstone grit formation quarried in the neighbourhood of Bramley, Yorkshire; it is very strong and durable, but in some cases weathers badly on account of an excess of grains of potash-felspar; it has been largely used in engineering structures.

**BRANCH.** Anything departing from the main body; in mining, a leader, string, or rib of ore that runs in a lode, or if a lode is divided into several strings, they are called branches, whether they contain ore or not.

**BRANCHED WORK.** Carved and sculptured leaves and branches in monuments and friezes.

**BRANCHES.** The ribs of a Gothic vault rising upwards from the tops of the pillars to the apex and appearing to support the ceiling or vault.

**BRAND.** A mark made by a hot iron; brands are the distinguishing marks on timber; that from the Swedish ports being stencilled with red letters or marks on the ends; that from the Canadian ports have black letters and white letters on the ends, and red marks on the edges; that from the Norwegian ports are generally marked with blue letters; from the Russian and Finland ports it is dry stamped on the ends without colour.

**BRANDERING.** A Scotch term applied to a method of counterlathing.

**BRANDISHING** or **BRATTISHING.** A term used for carved work, as a crest, battlement or other parapet.

**BRANDRITH.** A fence or rail round the opening of a well.

**BRAISER.** A worker in brass; a pan for charcoal.

**BRASH.** Rock disintegrated into small fragments.

**BRASS.** Is an alloy of copper and zinc, the proportions varying according to the purpose for which the brass is required.

**BRASS.** In the Middle Ages, a plate of metal inserted or affixed to a flat gravestone.

**BRASS BUSHED.** Is a term applied when the holes in locks for the pipe of the key and for the handle of the door to work in are bound with brass; also applied to axle pulleys when the hole in which the axle works is bound in brass.

**BRASSES.** That part of a lathe in which the mandrel lies; also that part of a machine in which the ends of a spindle or axle revolve.

**BRASSES (Sepulchral).** Monumental plates of brass or mixed metal, formerly termed latten, inlaid on large slabs or stone, which usually form part of the pavement of a church, and represent in their outline, or by lines engraved upon them, the figure of the deceased.

**BRASS FACED.** Anything having a thin plate of brass on the face only, such as axle pulleys.

**BRASS FOIL.** Dutch gold; brass beaten out thin.

**BRATTISHING.** Anciently, carved openwork.

**BRAY.** Anciently, a bank or earthen mound.

**BRAZE.** To braze is to join two pieces of metal together with hard solder.

**BRAZILETTO WOOD.** Is an inferior kind of Brazil wood, of a ruddy orange colour; principally used for dyeing and turnery.

**BRAZIL WOOD** (*Cæsalpina echinata*). Is a wood which yields a red dye; it is principally imported from Pernambuco; the tree is large, crooked, and knotty; the bark is very thick, and equals the third or fourth of its diameter.

**BRAZIL WOOD LAKE** or **DROP LAKE.** Is a pigment made by dropping a mixture of Brazil wood through a funnel on to a slab; the drops are dried and mixed into a paste with gum water.

**BRAZING.** Is a method of mending broken band saws; also applied to fine and neat joints in iron, brass, steel, etc., made by welding.

**BRAZING** or **BRASS SOLDERING.** Implies soldering with the constituents of brass (zinc and copper); also applied to the process of soldering with any hard solder.

**BREAK.** A projection or recess from the surface or wall of a building; also applied in joinery to the projections formed by a moulding being mitred round a projection.

**BREAK.** A term used in the north of England to signify "bell cast".

**BREAK.** In electricity, the distance between the broken ends of the circuit.

**BREAK HEADS.** In glazing, leads used at the point where the different sections of a large light are joined in fixing.

**BREAKING DOWN.** Is the method of dividing a baulk of timber into boards or planks; if the planks are sawn longitudinally through their thickness, the saw cut is called the "ripping cut" and the former the "breaking cut".

**BREAKING LOAD or WEIGHT.** Is that dead load which, when steadily applied, is just sufficient to produce fracture in the material or structure.

**BREAKING JOINT.** The joint formed by the meeting of several heading joints in one continued line.

**BREAKING JOINT.** In joinery, is not to allow two joints to come together.

**BREAKING STRESS or ULTIMATE STRESS.** On any piece of material, is the stress produced by the breaking load.

**BREAK JOINT.** In masonry, is the disposition of the stones (or bricks) so that the joints shall fall immediately over one another.

**BREAST.** The wall between the floor and the sill of a window.

**BREAST.** In mining, the face of coal workings.

**BREAST.** In the north of England, a riser; also applied both to a step and to the seat of a water-closet.

**BREAST DRILL.** A drill worked against the breast.

**BREAST LININGS or WINDOW BACKS.** Cover that portion of the wall between the inside ledge or window board and the floor.

**BREAST WALLS.** Are those erected to sustain the face of solid earth; a wall breasting a slope.

**BREAST-WHEEL.** In mill work, a form of water-wheel in which the water is delivered to the float-boards at a point somewhat between the bottom and top; buckets are seldom used on breast-wheels.

**BREASTWORK.** A work, or a mass of earth thrown up breast-high, to protect troops from the fire of the enemy.

**BREEZE.** Small ashes and cinders used instead of coal for the burning of bricks; finely broken coke.

**BREEZE BRICKS.** Are those made from sifted ashes, etc.

**BREMEN BLUE or VERDITER.** Is a compound of copper and lime, of a greenish tint.

**BRESTWEALL.** Anciently, a breast-high wall.

**BRESSUMMER.** A beam after the manner of a lintel, supporting a superincumbent part of a wall, and running longitudinally below that part; formerly called "sommer beam".

**BREST.** In architecture, the member of a column, more usually called the thorns, tore or torus.

**BRETACHLE.** Anciently, wooden towers, attached to fortified towns.

**BRETTICES.** Airtight partitions in mines.

**BREWERY.** Same as Brewhouse.

**BREWHOUSE.** A building appropriated to brewing malt liquors.

**BREWSTERITE.** A silicious mineral, called after Sir D. Brewster.

**BRICK.** A brick is a rectangular mass of clay or brick earth, formed into the required shape by means of a mould and hardened by burning. The size of a brick is generally understood to be nine inches long, four and a half broad and two and a half inches thick. This size is not to be relied on as bricks from different yards vary considerably.

**BRICK ASHLAR.** Is a term applied to walls with ashlar facing, backed in with brickwork.

**BRICK AXE.** Is used for axing off the soffits of bricks in arches, etc. As the bricks are generally rubbed smooth after axing, the more truly they are axed the less labour is required in rubbing them.

**BRICKBAT.** A piece or fragment of a brick.

**BRICK CLAY** or **BRICK EARTH.** Clay or earth used or suitable for making bricks.

**BRICK FLAT.** Built of bricks laid flat.

**BRICK GROINS.** The intersecting or meeting of two circles upon their diagonal elevations, drawn upon the different sides of a square, whose principal strength lies in the united force of elevation divided by geometrical proportions to one certain gravity.

**BRICKLAYER.** One who builds with bricks; this trade sometimes includes walling, tiling and paving with bricks or tiles.

**BRICKLAYING.** The art by which bricks are joined and cemented so as to adhere as one body.

**BRICK-NOGGED PARTITION.** A timber partition having the spaces between the quarters filled in with brickwork.

**BRICK-NOGGING.** Brickwork carried up and filled in between timber framing.

**BRICK ON EDGE.** The term applied in paving, coping, etc., when the bricks are laid on their edges.

**BRICK PIERS.** A pillar or mass of solid brickwork, used between window openings, doorways, arches for bridges, etc.

**BRICK TRIMMER.** A brick arch abutting upon the wooden trimmer under the slab of a fireplace to prevent the communication of fire; also called "trimmer arch".

**BRICK TROWEL.** A tool used by bricklayers for taking up mortar and spreading it on the top of a wall, etc.

**BRICKWORK.** Any work performed with bricks as the solid material.

**BRICKYARD.** A place where bricks are made.

**BRIDEWELL.** A house of correction; a prison so called from the palace near St. Bride's or Bridget's Well in London, which was turned into a penitentiary.

**BRIDGE.** A structure thrown across a river, roadway, etc., sup-

ported at intervals or at remote points. There are bridges built of stone, brick, iron, wood and wire, and on the principle of suspension. The celebrated wooden bridge which connects Teignmouth with the village of Shaldon, on the other side of the river, was built at a cost of £20,000, and is 1,672 feet in length, being the longest in England, and only surpassed in Europe by the Pont de Lyons (1,700 feet); it consists of thirty-four arches. In the construction of bridges five principal points are necessary to be considered—firstly, the choice of its position or locality; secondly, the vent or egress that must be allowed to the river; thirdly, the form of the arches; fourthly, the size and number of the arches; fifthly, the breadth of the bridge.

**BRIDGE (Wheatstone's).** A device for the accurate measurement of resistance; it consists of a number of known resistances, which may be "plugged" in or out; a galvanometer or battery.

**BRIDGE BOARD.** Same as Notch Board, which see.

**BRIDGED GUTTERS.** Are gutters formed of sheet lead laid upon boarding supported by bearers.

**BRIDGE OVER.** Is when several parallel timbers occur and another timber is fixed transversely or is said to "bridge over" them; common rafters "bridge over" the purlins.

**BRIDGE STONE.** A stone laid from the pavement to the entrance door of a house, over a sunk area, and supported by an arch.

**BRIDGING FLOORS.** Are floors in which bridging joists are used.

**BRIDGING JOISTS.** Common joists as distinguished from trimming joists.

**BRIDGING PIECES.** A short piece of timber framed in between two joists for the purpose of supporting a partition; short timbers placed between two opposite beams to prevent their nearer approach.

**BRIDLE.** The term applied to a trimmer in the north of England.

**BRIDLE JOINT.** A method in carpentry of forming a joint which is somewhat the reverse of the mortise and tenon joint; a notch is formed at the end of a timber which fits over the "bridle" or projection in the other piece.

**BRINDLING.** Stripes or marks of varying colour seen in bricks, owing to the partial exposure to the heat.

**BRIGHT.** A term applied to American timber that has not been discoloured by being floated down rivers for shipment.

**BRIGHT FRONTS.** Are bricks of superior quality made from washed earth.

**BRIGHTON GREEN.** Is a pigment made from copper.

**BRIGHT ROD BOLT.** A door bolt, resembling a barrel bolt, but not having a continuous barrel.

**BRIGHTS.** The name applied to deals, sawn from picked logs, and have not been floated down the river, therefore are the best, being much cleaner and a better colour; floating the deals damages, discolours and also causes the softer ones to warp when dried.

**BRIMSTONE.** Sulphur.

**BRINEPIT.** A pit or well of salt water.

**BRINDLE or COG JOINT.** Is a circular or triangular sinking cut on the underside of beams, into which the ends of the posts supporting the beam are fitted; also applicable to the feet of posts resting on beams or plates.

**BRINDLING.** Streaks of colour in unequally burnt bricks.

**BRINGING UP.** See Carry Up.

**BRISTLE BRICK.** A brick for cleaning cutlery.

**BRISTOL BOARD.** A fine smooth cardboard used for drawing purposes.

**BRISTOL STONE or BRISTOL DIAMOND.** Small brilliant pieces of quartz or rock crystal found in a rock near Bristol.

**BRITANNIA METAL.** A compound of tin with some antimony, zinc and copper.

**BRITISH ASPHALT (Patent).** Consists of quicklime, pitch, sawdust

and ground iron slag, melted and laid in a liquid state.

**BRITISH PLATE GLASS.** Is generally known as plate glass; it is produced by pouring white hot glass on to an iron table and rolling it under a heavy metal roller, the surface being either left rough, polished, or indented by a pattern cut on the surface of the table.

**BRITTLENESS.** In iron, is a want of tenacity or strength so as to be easily broken by pressure or impact; when iron is made too hot, so as to be nearly in a state of fusion, or so hard as to resist the action of the file, this is called the disposition of cast iron.

**BROACH.** An old English term for a spire; it is still in use in some parts of the country to denote a spire springing from the tower without any intermediate parapet.

**BROACH.** A boring drill.

**BROACHED WORK.** See Drove and Broached.

**BROAD AXE.** An axe for hewing timber.

**BROAD GAUGE.** The distance more than four feet eight and a half between the rails of a railway.

**BROB.** A spike having a head so shaped that it can be knocked out by a hammer; used for temporary connection of timbers in excavations.

**BROCATEL or BROCATELLO.** A variegated calcareous stone.

**BROCHANITE.** A sulphate of copper.

**BROKEN ASHLAR.** Is that composed of cut stone masonry in which the joints are not continuous.

**BROKEN JOINT FLOOR.** A floor in which there are breaks in the longitudinal joints of the boards owing to their not being of uniform width.

**BRONTERN or BRONTEUM.** In Greek architecture, brazen vessels placed under the floor of a theatre with stones in them to imitate thunder.

**BRONZE.** An alloy of copper and tin; it may also contain a little zinc.

**BRONZE AGE.** The age when the implements were of bronze.

**BRONZE POWDER.** A metallic powder for imitating bronze.

**BRONZING LIQUOR.** Chloride of antimony and sulphate of copper; used in bronzing.

**BRONZITE.** A variety of diallage.

**BROOD.** In mining, any heterogeneous mixture among tin or copper ore, as Mundick Black Jack, etc.

**BROUGHT FORWARD.** A term applied when irregularities in old paint work have to be filled up with putty or thick paint in order to produce a smooth and even surface for the reception of the new paint.

**BROWN.** A dusky colour inclining to red; a colour of various shades, resulting from a mixture of red, black and yellow.

**BROWN COAL.** Wood coal or lignite.

**BROWN HÆMATITE.** Is an oxide of iron (hydrated) of a brown colour, containing about sixty per cent. of iron, found in Devonshire, Cumberland, Gloucestershire and on the continent.

**BROWN HARD SPIRIT VARNISH.** Consists of dissolving shellac in spirits of wine, then pale turpentine is added and the whole shaken well together.

**BROWN OCHRE, SPRUCE OCHRE or OCHRE DE RUE.** Is a kind of dark coloured yellow ochre. See Spruce Ochre.

**BROWN PINK.** Is a vegetable pigment, generally of a greenish hue; works well in oil or water, dries badly, and if mixed with white lead it will not keep its colour.

**BROWN POST.** A term formerly applied to a beam laid across a building.

**BROWN SPAR.** A variety of dolomite, tinged by oxide of iron and manganese.

**BRUNSWICK BLACK.** Consists of boiling asphaltum for about six hours, over a slow fire, at the same time boiling oil (which has been previously boiled and had litharge introduced gradually until stringy) is then poured into the boiling asphaltum and boiled until it can be rolled into hard pills, it is then

allowed to cool, and is mixed with as much turpentine as will give it a proper consistency.

**BRUNSWICK BLUE.** Is a chemical compound containing alum and other substances.

**BRUNSWICK GREEN.** Is a pigment produced by heating copper with sal-ammoniac, chalk or lime, lead and alum are often added; it is of a bluish tinge; durable, not poisonous, and dries well in oil. The common quality consists of a mixture of chromate of lead and Prussian blue.

**BRUNSWICK ROCK ASPHALT.** Is that obtained from mines at Vor-whole in Brunswick Germany.

**BRUSH.** In electricity the luminous appearance of electric matter.

**BRUSHES.** Pieces of copper or carbon, etc., which take or collect current from a moving conductor.

**BRUSH WHEELS.** Wheels which turn each other without teeth, the rubbing surfaces being covered with stiff hairs, leather, etc.

**BRUSHWOOD.** Branches of trees cut off; a rough low close thicket.

**BUATA.** Anciently, an arch of chamber; a crypt.

**BUCCA.** Anciently, an almonry.

**BUCCINITE.** A fossil buccinum, *i.e.*, a whelk or trumpet shell.

**BUCENTAUR.** A figure half ox and half man, sometimes introduced into sculpture; also applied to the ancient state barge of the doges of Venice.

**BUCKERS.** In mining, bruisers of the ore.

**BUCKING.** A method in mining of breaking poor foul copper ore smaller by hand, with small flat irons, called bucking irons, in order to wash and separate the pure ore from the useless waste; this term is also used in lead mines; also used to signify washing or wet stamping ores.

**BUCKING IRON.** A tool used in mining for pulverising the ore.

**BUCKLED.** A term applied to a metal plate curved in two directions at right angles to each other; also applied to saws when not true or bent.

**BUCKLES.** Huge wooden "hair pins" for thatching.

**BUCKLING.** Failure by distortion or crumpling without fracture.

**BUCRANIA** or **BUCRANES.** In sculpture, ornamented ox skulls on Greek friezes.

**BUDDLE.** A large square frame of boards used in washing ore; a pit dug in the earth near the stamping mill, seven feet long, three feet wide and two and a half feet deep, where the stamped tin is washed from its impurities by water constantly running through the buddle; a boy called a "buddle boy" stands in the pit and works both with the shovel and with his feet.

**BUDGET.** A small pocket used by tilers for holding the nails in lathing for tiling.

**BUFF.** The colour of buff, a light yellow.

**BUFFET.** A cabinet or cupboard for plate, glass, etc.; a sideboard; a place for refreshment; a table with long, narrow shelves over it; also applied in the north of England to a stool.

**BUHL.** Unburnished gold; brass or mother-of-pearl used for inlaying.

**BUHLWORK.** Work in which wood or tortoise-shell is inlaid with buhl.

**BUHR STONE.** A silicious stone; much used for millstones for flour mills.

**BUILDER.** A person who contracts for performing the whole of the different artificers' works in a building; an architect.

**BUILDING.** An edifice; the art of raising fabrics, which comprises all the operations of an architect in building with stone, brick, timber, etc.

**BUILDING ACT.** An Act, 18 and 19 Vic., cap. 122, passed for regulating the construction and use of buildings.

**BUILDING OF BEAMS.** Scarfing, or the joining of two or several pieces of timber together in one thickness, to form a beam of large dimensions.

**BUILDING SURVEYOR.** Prepares from the drawings and specifications bills of quantities of intended works, for the use of the builder, on which to frame his estimates, etc.

**BUILT RIB.** A rib composed of several pieces laid side by side.

**BUILT UP.** In joinery, a circular piece of work, say, the rail of a door, etc., is said to be "built up" when made up of several pieces to obtain the required depth.

**BUILT UP BEAM.** A large beam built up of several pieces when timber cannot be obtained large enough.

**BULB T IRON STANDARDS.** Iron standards of T shape used for wire fencing.

**BULEUTERIA.** Among the Greeks, council chambers or public halls.

**BULKER.** A beam or rafter.

**BULKER.** A term sometimes applied to a beam or rafter.

**BULKINESS.** Is defined by Rankine as "the number of units of volume which a unit of weight of a substance fills"; generally expressed in cubic feet to the ton; the quality of being bulky; the opposite of heaviness.

**BULLANTIC.** Designating certain ornamental capital letters used in apostolic bulls.

**BULLEN NAILS.** Lacquered nails with round heads and short shanks.

**BULLET WOOD.** Obtained from the West Indies, is the produce of a large tree with a white sap; it is of a greenish hazel, close and hard in grain. Another species obtained from Berbice is of a hazel brown colour.

**BULL HEADS.** Are bricks that vary gradually in width.

**BULLNOSE STEP.** In staircasing, is when the lower step of a flight of stairs has its outer end formed into a quarter of a circle.

**BULL-NOSED** or **ROUND-ENDED BRICKS.** Are those with the corners rounded off.

**BULLOCK SHEDS.** Houses or sheds for feeding bullocks.

**BULL'S-EYE.** The central portion of a table of crown glass.

**BULL'S-EYE.** A small circular aperture for the admission of light or air.

**BULL'S-EYE.** A small circular window.

**BULL'S-EYE ARCH, FRAME, etc.** Is one that forms either a complete circle in elevation, or it may be an ellipse in elevation.

**BULL'S NOSE.** The external or other angle of a polygon, or of any two lines meeting at an obtuse angle.

**BUNCH or BUNCHY.** A mine that is sometimes rich and at other times poor is said to be bunchy.

**BUNCH or SQUAT.** In mining, a quantity of ore of small extent, more than a stone and not so much as a course; a mine is said to be bunchy when these are found in place of a regular lode.

**BUNDLE PILLAR.** A column or pier with others of small dimensions attached to it.

**BUNGALOW.** An Indian country house of a single floor, usually built of very light materials; this term is applied in England to similar structures.

**BUNNY.** In mining, of tin or copper ore; a pipe of ore; a great collection of ore without any vein coming out from it.

**BUNSEN BURNER.** A burner consuming a mixture of gas and air, giving heat with only a feeble light; for gas fires and stoves.

**BURDEN.** In mining, the tops or heads of streamwork, which lie over the stream of tin, and which must be first cleansed.

**BUREAU.** A writing table with drawers for papers; a chest of drawers; an office, chamber, or place for the transaction of public or state business.

**BURG.** An ancient structure in North Britain.

**BURGES.** The Persian word for towers; a fortified dwelling or enclosed town.

**BURGHOTE.** A contribution formerly levied for building or repairing the defences of a town.

**BURGUNDY PITCH.** A resin collected from the spruce fir.

**BURGUS.** Formerly a number of houses protected by a fortress.

**BURGUARD.** Formerly applied to the custody or keeping of a castle.

**BURGWORK.** Formerly a castle or borough.

**BURIN.** A graver; a tool for engraving.

**BURNER.** The part of a lamp or a gas pipe from which the flame issues.

**BURNER SOCKET.** In gas fitting, the short piece of tube which receives the burner.

**BURNING.** Lead burning or "autogenous soldering" consists in melting two edges together without using any solder.

**BURNING GLASS.** A glass so formed as to concentrate the sun's rays to a focus and produce intense heat.

**BURNING-HOUSE.** The furnace in which tin ores are calcined to sublimate the sulphur from pyrites.

**BURNING IN.** The method of securing a lead flashing, etc., by running in melted lead.

**BURNING MIRROR.** A concave mirror, usually of metal, which concentrates the sun's rays to a focus which produces intense heat.

**BURNING OFF.** Removing paint by softening it with a lamp flame, or a hot iron, and scraping.

**BURNISH GOLD SIZE.** Is generally a mixture of red chalk, black lead, deer suet and pipeclay, ground together into a stiff paste; it is laid over a basis of size and whitening to secure gold leaf that is to be rubbed bright with a burnisher.

**BURNISHER.** A tool of various kinds; used for smoothing and polishing a rough surface.

**BURNT.** Applied to iron, is when it is raised to too high a temperature, which causes its tensile strength and ductility to be reduced.

**BURNT CARMINE.** Is the pigment produced by partially charring cochineal till it resembles in colour the purple of gold.

**BURNT CLAY BALLAST.** Is made from any clay suitable for brick making; only used when ready-made ballast (stones) is not obtainable.

**BURNT ROMAN OCHRE.** Is a natural coloured clay, little if at all affected by heat, fire, or lime; suitable for distemper painting.

**BURNT SIENNA.** Is produced by burning raw sienna (or Terra de Sienna), a clay stained with oxides of iron and manganese; of an orange-red colour, durable in oil or water.

**BURNT STONE.** A cornelian, as if acted on by fire, found in ruins.

**BURNT UMBER.** Is a clay (raw umber) coloured by oxide of iron; it is burnt to give it a darker colour; useful as a drier and for mixing with white lead to make stone colour.

**BURNT VERDIGRIS.** Is an olive-coloured oxide of copper deprived of acid, dries well in oil, and is a more eligible pigment than in its original state.

**BURR.** A small metal washer used with a rivet.

**BURR.** Are masses of brick fused together, or single bricks overburnt or partially vitrified.

**BURRAS PIPE.** A tube in which to keep corroding powders.

**BURRÉ STONE.** A millstone which is almost pure silice; the best kind is of a whitish colour.

**BURROW.** In mining, the heap or heaps of deads, attle or earth (void of ore) which is brought out of a mine, and which generally lie round the shafts.

**BURRS.** Or excrescences on trees owe their beauty to the crowding together of small germs, apparently the unsuccessful attempts at the formation of branches from one individual spot. Sometimes the "burrs" occur of immense size so as to yield a large and thick slab of highly ornamental wood of most confused and irregular growth, and consequently the more valuable for veneers.

**BURSARY.** The treasury of a college or monastery.

**BURTON.** A manor; a manor-house.

**BUSH.** A circle of metal let into round holes or orifices, or into the sheaves of such blocks as have iron pins to prevent their wearing.

**BUSH HAMMERED STONE.** Is when the roughnesses of the stone are taken off with a bush hammer.

**BUST.** In sculpture, comprising the head, neck, shoulders and breast.

**BUSTUM.** Formerly a tomb.

**BUTLERY.** A butler's pantry; a larder.

**BUTT END OF A PIECE OF TIMBER.** Is that which was nearest the root of the tree.

**BUTTED.** If the ends of two pieces of timber (such as joists, etc.) are placed together they are said to be "butted"; this term is also applied to two timbers with the longitudinal grain of one at right angles to the other.

**BUTTER.** A bricklayer is said to "butter" a brick if he draws a little mortar as fine as he can upon the front and back edges and then lays it; it is only done when the work has to be kept down to a gauge as it leaves an air passage under every brick; therefore "buttering" should be condemned.

**BUTTERFLY or WINGED NUT.** Is a nut made with two wings or leaves (sometimes flattened out into one) whereby it can be turned between the thumb and finger.

**BUTTERY.** In some colleges a refreshment room for the students; a storeroom for provisions and liquors.

**BUTT HINGES.** Are those employed in the hanging of framed doors, etc., by its edge; also called "edge hinges".

**BUTT JOINT.** A joint in which the two pieces of wood to be joined are laid simply side by side, or end to end, without being tongued, rebated or splayed.

**BUTTON.** A small piece of wood or metal made to turn upon a centre, usually a screw; used for fastening doors, etc.

**BUTTON BLOCKED.** A term applied when a table top or other wide piece of joinery is fastened with buttons to allow it to shrink.

**BUTTON, CUP ENDED or SNAP RIVETS.** Are those having the points formed while the iron is hot, with a tool containing a nearly hemispherical hollow.

**BUTTRESS.** An abutment of masonry to strengthen and support a wall; it is added to the outside of the wall in order to increase its

stability against a thrust. The buttresses in the Early English style of architecture have less breadth and a much greater projection than the Norman style, and often stand out very boldly; they are sometimes continued without diminution, but they are generally broken into stages with a successive reduction in their projection and sometimes in their width; they generally terminate with a triangular pediment below the parapet and in some cases standing against it; in modern work it sometimes rises above the eaves and terminates in a pinnacle.

**BUTTS.** Hinges so made that the two halves abut when closed; called "edge hinges" in Scotland.

**BUTTRY.** A term applied to an equal dividend system among labourers.

**BUTTY GANG.** A body of navvies who contract to do work on the "butty" system.

**B. W. G.** Birmingham wire gauge.

**BYE-PARS.** A tap having a smaller pipe connected so as to allow gas to pass from one side to the other of the tap.

**BYRE.** A cow-house.

**BYSSOLITE.** A fine fibrous tremolite; asbestos.

**BYZANTINE ARCHITECTURE.** That about the year 328 A.D., when Constantine, who had previously resided at Rome, commenced his new capital of the East; it was then called Byzantium, now Constantinople.

**BYZANTEUM ARTIFICIUM.** Mosaic work.

## C.

**C.** As a numeral, stands for a hundred, CC. for two hundred, etc.

**C.** Generally denotes the "long hundred" of one hundred and twenty, by which slates are usually sold.

**CAABA.** An ancient Arab temple at Mecca with a mysterious black stone built in, sacred to all Moslems.

**CABBLING.** The method of breaking up pig iron, into small pieces, which has been subjected to the influence of a refinery; these pieces of iron are then heated in another furnace almost to fusion, hammered down into shape and drawn out into bar iron; also called "scabbling".

**CABIN.** A small room; a cottage or hut.

**CABINET.** A closet or small room; a private room in which consultations are held; a piece of furniture consisting of drawers, doors, etc.; the cabinets in Tudor times were of massive proportions, carved in oak, ebony, walnut, etc.

**CABINET BRAD.** A small-sized brad.

**CABINET LOCK.** This term applies to such as desk, drawer, box, cupboard locks, etc. These are called

"straight" when the front plate is screwed flat against the woodwork without any sinking in; it is termed "cut" when let in so that the back plate is flush with the surface of the wood.

**CABIN HOOK.** A hook for securing a casement, sash or door when open.

**CABLE or CABLING.** An ornament resembling the twisted strands of a rope; a moulding of a convex circular section rising from the back or concave surface of a flute.

**CABLED COLUMN.** One in which cables are used.

**CABLED FLUTING.** Flutes or channels hollowed out for about two-thirds of the upper part of their length and the remainder cut so that each flute has the appearance of being partly filled up by a round moulding or "cable".

**CABLE MOULDING.** Is a moulding cut in the shape of a rope; much used in the later period of the Norman style.

**CABLES.** See Wires.

**CADASTRE.** A French term for a "terrier," or official survey and valuation of property.

**CADMIA.** A sulphide of cadmium.

**CADMLA.** Brass ore.

**CADMIUM.** A white metal resembling tin.

**CADMIUM YELLOW.** A sulphide of cadmium.

**CADUCEUS.** A rod entwined by two winged serpents; carried by Mercury.

**CÆLATURA.** A Greek term applied to all sorts of ornamental work in metal, except statues.

**CÆMENTICIUS.** Built of unhewn stones; large irregular masses laid together without mortar.

**CAEN STONE.** Is an oolitic lime-stone of a pale cream yellow colour, easily worked and carved, soft when first quarried, and, although hardening upon exposure, weathers badly.

**CAFÉ.** A coffee-house; a restaurant.

**CAGE.** In carpentry, an outer work of timber enclosing another within it.

**CAIRN.** A conical heap of stones anciently erected as a memorial, especially over a grave.

**CAIRNGORM.** A yellow or brown variety of rock crystal from Cairngorm in Scotland.

**CAISSON.** In vaulting, the sunken panels on ceilings, cupolas and vaults.

**CAISSON.** A wooden frame or box with a flat bottom, made of strong timbers firmly connected together; used for laying foundations under water where the coffer-dam cannot be employed.

**CAL.** A term applied in Cornish mining to a kind of iron gossan stone found in the bryle and backs of lodes.

**CALCAR.** A small oven or reverberatory furnace, in which the first calcination of sand and potashes is made for turning them into frit, from which glass is ultimately made.

**CALCAREOUS EARTH.** A species of earth which becomes friable by burning and is afterwards reduced to an impalpable powder by mixing it with water; the same as lime and of which there are various combinations, as marble, limestone, gypsum, etc.

**CALCAREOUS SANDSTONES.** Are

those containing a large proportion of carbonate of lime.

**CALCAREOUS SPAR.** Crystallised carbonate of lime.

**CALCAREOUS TUFA.** Carbonate of lime in alluvial deposit.

**CALCATORIUM.** Among the Romans, a raised platform of masonry in the cellar attached to a vineyard.

**CALCIC.** Containing calcium.

**CALCIFY.** To become stony by secretion of lime.

**CALCINATION.** The subjecting of a substance to the action of heat to drive off its volatile parts, and thus reduce it to a friable state.

**CALCINATORY.** A vessel used in calcination.

**CALCINE.** To reduce to powder or a friable state by heat; to become calcined.

**CALCIUM.** The metallic base of lime.

**CALCSINTER.** A stalactitic carbonate of lime.

**CALC SPAR.** Calcareous spar.

**CALC TUFF.** Calcareous tuffa or tufa.

**CALDARIUM.** A close vaulted room; one of the apartments attached to ancient baths for producing a state of profuse perspiration.

**CALDERWOOD CEMENT.** A kind of cement similar to Roman cement; it is a natural cement made by burning nodules found in geological formations; sets rapidly, but attains no great ultimate strength.

**CALF PEN.** A small apartment within a cow-house for nourishing calves.

**CALF or KERF.** In carpentry, the wedged-shaped portion of the timber which forms at a joint; a kind of half dovetail.

**CALIBER.** The greatest extent or diameter of a round body.

**CALIDUCTS.** A term formerly applied to hot-water pipes disposed along the walls of houses and apartments for conveying heat.

**CALIN.** A mineral like lead and tin.

**CALIPERS.** A pair of calipers is an instrument resembling a pair of compasses but with bent legs; for

taking the diameter of a convex or concave body in any part.

**CALK.** A Cornish term for lime.

**CALKING.** Is a method of knocking down the edges of iron plates with a blunt calking tool, so as to bring the edges together and close the joint; also applied in the case of rivets when they do not fit close to the plate, the head or point is beaten down close.

**CALKING IRON.** A chisel for calking.

**CALLIPER.** In the timber trade, is the measure used for determining the freight due to a ship for space occupied in her.

**CALLIPERS.** Is a term chiefly used by turners and signifies size, *e.g.*, the fillet "callipers" one inch, means that it measures one inch.

**CALME or CAME.** The lead bars in which the glass of a lead light is fixed.

**CALOTTE.** A round cavity or depression in the form of a cap or cup; a concavity in the form of a cup or niche, lathed and plastered; used to diminish the height of a chapel, etc., which would otherwise appear too high for the breadth.

**CALQUING.** The process of copying or transferring a drawing.

**CALX.** Lime or chalk; the substance of a metal or mineral which remains after being subjected to violent heat; an oxide.

**CALYON.** Flint or pebble stone; used in building walls, etc.

**CAM.** A mechanical contrivance for changing a circular motion to an alternate one.

**CAMAROSIS.** An elevation terminated with an arched or vaulted head.

**CAMBER.** A slight arching or convexity upwards.

**CAMBER.** An arch on the top of an aperture or on the top of a beam.

**CAMBER ARCH.** An arch having a small rise; usually allowed to rise only an eighth of an inch in a foot.

**CAMBERATED or CAMBERED.** Arched; having a slight rise.

**CAMBER BEAM.** A beam having a slight rise in the centre.

**CAMBER SLIP.** A slip of wood used for giving a camber to an arch while building it.

**CAMBER WINDOW.** One arched above.

**CAMBLETED.** A term applied to the roots of the ash, etc., when, as is often the case, they are curiously veined, showing a beautiful surface when polished.

**CAME LEAD.** In glazing, rough drawn, pressed or cast lead that has not been put through the lead vice and compressed for use.

**CAMEO.** A stone composed of different coloured layers, having a subject in relief cut upon one or more of the upper layers; an under layer forming the ground.

**CAMEPHORÆ.** Figures of young persons of either sex bearing on their heads baskets containing materials for sacrifice; sometimes erroneously called "caryatides".

**CAMERA.** A Greek term applied to an arched or vaulted roof, covering or ceiling, formed by circular bands or beams of wood, over the intervals of which a coating of lath and plaster was spread.

**CAMERA - LUCIDA AND CAMERA-OBSCURA.** The former is a light chamber or vault, and the latter a dark chamber.

**CAMBERATED.** A term applied to the roof of a church; arched; vaulted.

**CAMES.** The length or strips in which "fret lead" is made.

**CAMINUS.** A term applied by Pliny to a smelting furnace.

**CAMP CEILING or COOM CEILING.** A ceiling whose form is convex inwardly, or sloping such as the slope which connects the wall and ceiling of an attic.

**CAMPANILE.** A bell tower.

**CAMPANÆ or CAMPANULÆ or GUTTÆ.** The drops of the Doric architecture.

**CAMPANIM.** A species of marble taken out of the mountain of Carrara in Tuscany; so called because it imitates the sound of a bell when wrought.

**CAMPHOR WOOD.** Is imported from China and the Indies in logs

and planks of large size ; used in England for cabinet work and turnerys.

**CAMP SHEDDING.** Sheet piling in front of a barge bed.

**CAMP SHEETING or CAMPSHOT.** The sill or cap of a wharf wall.

**CAMPUS MARTINUS.** A district outside the walls of ancient Rome, between the Quirinal and Pincian Mounts and the Tiber ; dedicated to Mars.

**CAM WHEEL.** An eccentric wheel.

**CAM WOOD.** A fine red dye wood, brought from Africa ; used for ornamental and eccentric turnery.

**CAN.** A term applied to a chimney pot in the north of England.

**CANADIAN BALSAM.** A kind of turpentine obtained from the balsam fir.

**CANADIAN or RED OAK** (*Quercus rubra*). Is of a brown colour, light and spongy in grain, moderately durable.

**CANAL or CANALIS or CHANNEL of the VOLUTE.** In the Ionic capital is a deep concave groove with its lower edge bending down toward the middle ; it runs across the face of the capital between the volutes and revolves about the spirals on either side, diminishing gradually in breadth until it loses itself in the eyes of the volutes.

**CANAL.** An artificial water-course ; a flute ; a groove.

**CANALIS.** In Latin, a water-pipe or gutter ; applied in architecture to any channel, such as flutings of columns ; the channel between the volutes of the Ionic column.

**CANAL of the LARMIER.** In architecture, the hollowed plafond or soffit of a cornice which makes the pendent monchette.

**CANARY PINE.** Obtained from South America, is a sound, light greenish coloured wood, strong and very free from knots.

**CANCELLI.** Latticed windows, or those made with cross bars of wood or iron ; the balusters or rails round the altar of a church, or those which close in the bar of a court of justice.

**CANDELABRUM.** A tall stand for lamps ; a high ornamental candle-

stick ; an ornamented candlestick with branches.

**CANGICA WOOD.** From South America, is of a light and yellow-brown colour ; used for cabinet work and turnery.

**CANHOOK.** Ropes with flat hooks at each end ; used for hoisting barrels.

**CANISTER ELBOW.** An elbow in an iron flue pipe shaped like a T, one end of the horizontal part of the T being closed and having a movable stopper to allow the flue to be cleaned.

**CANNEL or CANDLE COAL.** A hard compact bituminous coal which burns with a bright flame like a candle.

**CANOPY.** A covering or hood ; the enriched projecting head to a niche or tabernacle. The tablet or dripstone, whether straight or circular, over the heads of doors or windows, if enriched, is so called.

**CANOPY.** In Gothic architecture, an ornamental projection over doors, windows, etc. ; coverings over niches, domes, tombs, etc.

**CANT.** An external angle or quoin of a building ; the cutting off the angle of a square ; sometimes used as equivalent to "splayed" ; an obtuse angle.

**CANT BAY.** One built on a semi-hexagonal plan, or on a polygonal plan ; also termed a "canted window," or a "canted bow".

**CANTED.** Applied to a pillar or turret when built on a polygonal plan ; also applied to anything sloping or bevelled.

**CANTED COLUMN.** One built on a polygonal plan.

**CANTED WINDOW.** A window polygonal in plan.

**CANTHARUS.** A fountain or cistern in the atrium or courtyard before ancient churches.

**CANTHERS or CANTERII.** In ancient carpentry, the common rafters of a roof.

**CANTILEVER.** A projecting beam of wood, stone or iron, supporting a cornice, balcony, etc.

**CANTING.** The cutting away of a part of an angular body at one of its angles.

**CANTLING.** The lower of two courses of burnt bricks which are placed on the top of a clamp before fire is applied.

**CANT MOULDING.** One with one or more bevelled instead of curved surfaces, neither perpendicular to the horizontal, nor to the vertical surface to which it may be attached.

**CANTONED.** Having projecting quoins.

**CANTONED BUILDING.** Is a building having its angles decorated with columns, pilasters, rustic quoins or anything projecting from the naked wall.

**CAP.** The cornice or coping at the top of a chimney.

**CAP.** In joinery, signifies the uppermost of an assemblage of parts, generally turned; the capital of a column.

**CAP.** Same as Coping. A "cap flashing" is an over flashing.

**CAPACITY.** Generally signifies the power of holding or retaining.

**CAP AND LINING.** In gasfitters' work, a joint used for connecting a composition pipe to an iron pipe. The lining consists of a short piece of brass tube soldered to the composition, and the cap is screwed to the iron pipe.

**CAPEL.** A stone composed of quartz, schorl and hornblende, usually occurring in one or both walls of a lode, and more frequently accompanying tin and copper ores.

**CAP FLASHING.** An "over flashing".

**CAPILLARY ATTRACTION AND REPULSION.** The cause which determines the ascent or the descent of a fluid in capillary vessels when the end is dipped into water, mercury, etc.

**CAPITAL.** The ornamental head or uppermost part of a column or pilasters; the capital is the distinguishing feature of the several orders.

**CAPITAL.** The head or uppermost member of any part of a building.

**CAPITAL OF A BALUSTER.** The crowning or head mouldings of it.

**CAPITAL OF A LANTERN.** The covering by which it is terminated.

**CAPITAL OF A TRIGLYPH.** The square band which projects over it.

**CAPITOLIUM.** A temple or citadel at Rome, on the Tarpeian rock.

**CAPLE STONE.** A stone in Cornwall something like limestone, but will not burn.

**CAPONIERE.** A passage from one part of a work to another protected by a parapet.

**CAPPED PIPE.** A drain pipe having a hole on the upper side fitted with a cap so that the pipe may be examined or cleaned without being taken up.

**CAPPAGH BROWN or EUCHROME.** Is a pigment produced from bog earth and manganese.

**CAPPING.** In joinery, any piece of stuff that forms a cap or covering.

**CAPPING TILE.** The upper or covering tile in Italian tiling, or any other tiling laid in a similar manner.

**CAPREOLI.** Ancient term for the joints or braces of a trussed roof.

**CAPREOLUS.** A forked inclined timber to afford support to anything.

**CAPSA or CAPOULA.** A box, cylindrical in form, used by the Romans for holding books.

**CAPSTAN-HEADED SCREW.** A screw having a cylindrical head with radial holes, by insertion of a pin, into which the screw may be turned.

**CAPSTONE.** A kind of fossil echinite; any stone forming a cap or capping.

**CAPTAIN.** An overseer; an experienced miner; one who directs and oversees the workmen and business of a mine.

**CARACOLE.** A staircase in the form of a helix or spiral; a winding staircase.

**CARACOLY.** An alloy of gold, silver and copper.

**CARADOC FORMATION.** The uppermost of the two great divisions of the lower silurian strata of Murchison; seen principally in Shropshire, Somersetshire, etc., and on the eastern borders of Wales.

**CARAVANSERAI.** In the East, a large unfurnished inn, with a spacious court in the middle for the accommodation of caravans and other travellers at night; a similar structure in towns with shops, etc.

**CARBIDE.** A combination of carbon with a metal.

**CARBO-HYDRATE.** An organic compound of carbon and water.

**CARBOLIC ACID.** An acid produced from coal tar.

**CARBON.** Pure charcoal.

**CARBONATE.** A salt of carbonic acid and a base; the chief varieties are described under their alkaline, earthy and metallic bases.

**CARBONATED.** Combined with carbonic acid.

**CARBONIC.** Pertaining to carbon.

**CARBONIC ACID.** A gaseous combination of carbon and oxygen.

**CARBONIC OXIDE.** A gaseous compound of oxygen and carbon containing a less proportion of oxygen than exists in carbonic acid.

**CARBONIFEROUS.** Containing coal.

**CARBONISE.** To convert into carbon by combustion or the action of fire.

**CARBOY.** A large globular bottle usually protected by basket work.

**CARBURET.** A compound of carbon with nitrogen, metals, etc.

**CARCASE or CARCASS.** The term applied to a building in the rough state, *i.e.*, the naked walls and the rough timber work of the flooring and quarter partitions before the building is plastered or the floors laid.

**CARCASE or CARCASS FLOORING.** The joists, etc., which support the floorboards above and the ceiling below.

**CARCASE ROOFING.** The timber framework which spans the building and carries the roof covering.

**CARCASE SAW.** Is a large kind of dovetail saw having about eleven teeth to the inch.

**CARCER.** A prison or gaol.

**CARCERES.** Goals and starting points in ancient racecourses.

**CARDINLES SCAPI.** Ancient term in joinery for the stiles of doors.

**CARDO.** A pivot and socket; an apparatus by means of which the doors of the ancients were fixed in their places and made to revolve in opening and shutting.

**CARMINATED LAKE.** A pigment produced from cochineal.

**CARMINE.** Is the most brilliant red pigment known; it is made from the cochineal insect; it is not durable and is too expensive for ordinary painting.

**CARN.** In Cornish mining, a rock; a heap of rocks; a high rock.

**CAROL.** A small closet or enclosure to sit and read in.

**CAROLITIC.** In architecture, decorated with branches.

**CAROLITIC COLUMN.** One with a foliated shaft.

**CARPENTER.** An artificer who practises the science of framing, such as roofs, floors, partitions and other assemblages of rough timber used in the construction of buildings.

**CARPENTER'S RULE.** The instrument used by carpenters to take their dimensions or sizes; it is sometimes fitted with a brass slide, which makes it a slide rule, and enables them to make calculations in multiplication and division, besides other operations.

**CARPENTER'S SQUARE.** Is an instrument whose stock and blade consists of an iron plate of one piece. One leg is eighteen inches long and numbered on the outer edge from the exterior angle with the lower part of the figures adjacent to the interior edge. The other leg is twelve inches long and numbered from the extremity towards the angle, the figures being read from the internal angle as on the other side. Each of the legs is about an inch wide.

**CARPENTRY.** Is the art of combining pieces of timber for the support of any considerable weight or pressure; the work of a carpenter; woodwork consisting of large pieces of timber not prepared at the bench before fixing, such as joisting for floors, roofs, partitions, etc.

**CARRARA MARBLE.** A species of white marble; it is distinguished

from the Parian or statuary marble by being harder and less bright; derives its name from Carrara in Italy.

**CARREL.** A small oratory; a pew, closet or desk with a seat placed under a window where the monks were engaged in copying writings.

**CARRIAGE.** The frame with pivot, spring, etc., supporting a bell; a support or gallery for a gas globe.

**CARRIAGE.** A brass frame with a lever pivoted on it, to which a house bell is fixed.

**CARRIAGES.** In staircasing, are rough pieces of timber placed under (and at the same inclination) stairs to support their weight; rough brackets or pieces of wood are fastened to the sides of the carriages to support the treads; they fit into the angle formed by the tread and riser.

**CARRIER.** The piece of iron which is fixed by a set screw on the end of a shaft or spindle to be turned in a lathe to carry it round by the action of the driver of the centre chuck.

**CARRY UP.** Signifies that the work under notice has to be taken to a certain given height, *e.g.*, "carry up that wall" means build up that wall.

**CARSE OR CARSE LAND.** Low, fertile, alluvial land adjacent to a river.

**CARTAGE.** The act of carting or the price paid for it.

**CARTON PIERRE.** Is a variety of papier-mâché, and consists of pulp of paper, whiting and size pressed into moulds.

**CARTOUCHE.** A scroll on the cornice of a column; an ornament representing a scroll of paper; a tablet to receive an inscription; a modillion.

**CARTOUCHE.** In Egyptian buildings, a hieroglyphic signifying the name of a king or other important person.

**CARTRIDGE PAPER.** Thick, stout drawing paper.

**CARTULARY.** A register book of a monastery; the officer who had charge of it.

**CARUCRU OR CHICA.** A pigment of a soft, powdery texture and rich

morone colour; first brought from South America by Lieut. Mawe.

**CARVE.** To cut ornaments or foliage in stone or wood.

**CARVER.** Is an artificer or one who cuts wood into various forms and devices.

**CARVING.** The act or art of cutting figures in stone or wood; a carved figure.

**CARYATIC.** Pertaining to caryatides.

**CARYATIC ORDER.** An order in which the entablature is supported by female figures.

**CARYATIDES, CARYATES** or **CARYANS.** Are female figures employed instead of columns to support an entablature. Literally, a woman of Caryæ.

**CASA.** A term applied by Vitruvius to a cottage; a small country house.

**CASE.** A term sometimes to denote the carcass of a house; the outside covering of anything.

**CASE BAY.** The joists framed between a pair of girders in naked flooring; any bay of flooring except the end one, which is called a "tail bay".

**CASED.** The outside of a building faced or covered with materials of a better quality; thus a brick wall is said to be "cased" with stone, or with bricks superior in quality to those used for the inner part of the wall.

**CASED SASH FRAME.** Those sash frames having their interior vertical sides hollow to hold the weights for the sashes.

**CASED TIN.** In Cornish mining, that which is reframed by the gentlest current of water and prevented from running off the frame by turf placed at the bottom.

**CASE HARDENED.** Iron is said to be "case hardened" when its surface is converted for a slight depth into steel.

**CASE HARDENING.** Is the process by which iron is "case hardened"; the surface of wrought iron is turned into steel, to obtain a hard exterior to resist wear. One method consists of placing the material to be "case hardened" in an iron box full of

bone dust or other animal matter, and subjecting it to a red heat from about half an hour to eight hours according to the thickness of steel required on the surface of the iron.

**CASEMATE.** In fortifications, a vault in any work of defence, with embrasures for cannon.

**CASEMATE or CASEMENT.** A small hollow moulding one-fourth of a circle in section. Same as the Cavetto or Scotia.

**CASEMENT.** A window in which the sashes are hung on hinges like a door.

**CASEMENT STAY.** Generally an iron stay bar for holding open the sash of a casement, and frequently pierced with holes to allow the casement to be secured at any distance.

**CASE OF A DOOR or DOOR CASE.** The wooden frame in which a door is hung; usually called "jamb" or "jamb linings".

**CASE OF A STAIR.** The walls surrounding a staircase.

**CASES.** A term applied in Cornwall to very small fissures in the strata of the earth, through which small streams of water flow when they are opened by the working underground.

**CASES AND FRAMES.** Movable sheeting and supports; used in driving small headings in tunnelling.

**CASING.** The wooden structure holding concrete walls, etc., in position while setting.

**CASING OF TIMBER WORK.** A method of plastering a house all over on the outside with mortar and then striking it wet by a ruler with the corner of a trowel to make it resemble the joints of freestone.

**CASINO.** The Italian name applied to a small country house; it is now applied to a club house or public building, on the continent, provided with rooms for social meetings, music, dancing, etc.

**CASSEL EARTH.** A bituminous earth; an ochreous pigment of a brown colour, more inclined to the russet hue.

**CASSEL'S YELLOW.** Is an oxy-chloride of lead.

**CASSIA FISTULA.** Is a native vegetable pigment.

**CASSITERITE.** The chief ore of tin.

**CASSIUS.** A purple colour from the muriate of gold by mixtures with chlorides of tin.

**CAST.** The same as Warp.

**CAST AFTER CAST.** In Cornish mining, is a method of throwing up tin stuff, etc., from one stage of boards to another, each cast being about five or six feet high.

**CASTELLA.** Ancient reservoirs in which the waters of an aqueduct were collected.

**CASTELLA.** Square towers in the celebrated Roman wall of Severus, which was raised to separate England from Scotland.

**CASTELLATED.** Built in imitation of an ancient castle.

**CASTELLATED HOUSES.** Those built with battlements and turrets, in imitation of ancient castles.

**CASTELLUM.** The receptacle in which the water was collected and heated for the public baths of the Romans; a castle.

**CASTER.** A small wheel on a swivel, or a ball enclosed in a socket attached to the leg of a table, chair, etc.

**CASTING.** Among sculptors, the taking casts or impressions of figures, busts, leaves, etc.

**CASTING OF DRAPERIES.** Among sculptors and painters the disposition of the folds of garments.

**CASTING or WARPING.** In joinery, the bending of the surfaces of a piece of wood from their original state, caused by unequal temperature, etc.

**CAST IRON.** Is produced by remelting ordinary foundry pig iron containing from 2 to 5 per cent. of carbon.

**CAST IRON SHOES.** A term applied to sockets or shoes which are attached to the ends of tie beams, posts, etc.

**CASTLE.** A building fortified for military defence; a house with towers, generally enclosed with walls and moats.

**CAST LEAD.** Is thicker, heavier, and has a harder surface than milled lead; it is generally made in sheets from sixteen to eighteen feet long and six feet wide.

**CAST NAILS.** Are produced by running molten iron into moulds; they are cheap, brittle and inferior in strength; used for common work.

**CAST OF SOLDER.** Is a term applied to solder run in a mould of sand, or in **V** shaped moulds in form, thus :



**CAST STEEL.** Steel fused and run into moulds.

**CATABASION.** A place under the altar in a Greek church in which relics were deposited.

**CATACOMBS.** Subterraneous places or excavations for burying the dead.

**CATACOUSTICS.** That part of acoustics which treats of echoes or reflected sounds.

**CATADROME.** A tilt yard, or places where horses ran for prizes; an engine like a crane to draw up or let down any weight.

**CATAFALCO.** A temporary structure of wood representing a tomb placed over the coffin of a distinguished person.

**CATALPA.** A genus of North American trees.

**CATAPHONICS.** The doctrine of reflected sounds.

**CATCH.** A contrivance in machinery acting on the principle of a latch; sometimes applied to a small fastening.

**CATCH DRAIN.** A drain across a declivity, to catch the surface water; a drain alongside of a canal, or along the side of a large open drain, to catch the surplus water.

**CATCHLAND.** Land not known to belong to any parish, and open to appropriation.

**CATCH MEADOW.** A meadow which is irrigated by water from a hill-side.

**CATCHMENT or CATCHMENT AREA.** An area which may be drained of its water.

**CATCH PIT.** A small pit sunk for the collection of solid matter, usually under a gully, that it may not pass into the drain.

**CATENARIAN ARCH.** Is one in which the intrados is a catenary curve.

**CATENARY CURVE.** The mechanical curve formed by a chain hanging freely from the two extremities.

**CATHEDRA.** A bishop's throne; a professor's chair; a chair without arms; a chair with a long deep seat.

**CATHEDRAL.** The principal church in a diocese, in which is placed the chair or throne of a bishop.

**CATHEDRAL GLASS.** Tinted glass; used chiefly for church windows; it is generally rolled or sheet glass of a neutral tint, with a kind of rough texture which gives the colours a sort of mellow shade not to be found in smooth glass; it is made to any tint.

**CATHERINE-WHEEL.** An ornamented tracery window or compartment of a window of a circular form, with rosettes or radiating divisions, spokes or mullions; used in Gothic buildings.

**CATHETUS.** A perpendicular line falling and passing through the centre or eye of the volute of the Ionic capital; a perpendicular line passing through the centre of a cylindrical body, such as a baluster or column.

**CATHINIA.** A subterraneous mineral vein out of which gold and silver are dug.

**CATHODE.** In electricity, the negative pole by which the electric current leaves.

**CAT'S HEAD.** See Beak Head.

**CATTUS.** A movable shed usually fixed on wheels.

**CAUL.** In veneering, a piece of wood shaped to the surface to be veneered, which is passed down on the veneer after it has been glued, in order to squeeze out the superfluous glue; they are usually made of dry pine, and secured by cramps.

**CAUL.** Called a "rubber" by a joiner; used in cleaning up mouldings; it is usually a piece of wood shaped to fit the moulding and covered with a piece of loose sand-paper.

**CAULICOLI, CAULICOOLE or CAULICULUS.** The small inner volutes, twists, or stalks in the Corinthian capital, springing out from the four greater or principal caules or stalks.

**CAULING.** A method of veneering in which the pressure is accompanied by dry heat.

**CAULK.** Same as Calk and Cog. An iron bar is said to be "caulked" or "corked" when it is turned up at the end to secure it in a wall; to "caulk" a lead joint is to consolidate the lead by hammering.

**CAULKING or COCKING.** A method of fixing the tie beams of a roof or the binding joists of a floor down to the wall plates.

**CAULKING.** A short tenon at the bottom of a cast-iron column, or a short tenon at the bottom of a stanchion or other iron structure.

**CAULKING.** Splitting the end of an iron bar, and turning one piece up and the other down; consolidating a lead joint by hammering, which is also sometimes called "stemming"; called "batting" in Scotland; closing a joint in iron plates by knocking down the edges with a blunt tool; stopping the joints in runners or poling boards; usually performed with stable litter or old refuse, etc.

**CAUNTER AND CAUNTING.** In Cornish mining, *contra*; when two lodes run across, the one with respect to the other is called a counter or *contra lode*.

**CAUSEWAY.** A carriage road; a raised roadway.

**CAUSEWAYING.** A term in the North applied to pitcher paving.

**CAUSEWAYING.** A Scotch term for pitcher paving.

**CAUSTIC CURVE.** The term applied to a curve, to which the rays of light reflected, or reflected by another curve, are tangents; the curve is of two kinds, the catacaustic caused by reflection, and the diacaustic caused by refraction.

**CAVÆDIAM.** Another name for the atrium of a Roman house.

**CAVÆDIUM.** An open quadrangle or court within a house.

**CAVÆDIUM DISPLUVIATUM.** A term applied by Vitruvius to an open court exposed to the rain.

**CAVALIER.** In fortifications, an elevation for cannon within a bastion.

**CAVAZION.** In architecture, the trench made, or the act of digging it, for laying the foundation of a building.

**CAVEA.** The part of an ancient theatre occupied by the audience.

**CAVÆE.** In ancient architecture, the subterranean cells in an amphitheatre; for confining the wild beasts for the fights of the arena.

**CAVETTO.** A concave moulding whose section is an arc of a circle.

**CAVING IN.** Falling in of earth in a tunnel or cutting.

**CAVITY WALLS.** See Hollow Walls.

**CAWK.** A compact variety of sulphate of baryta.

**CECLE.** An old English term for a canopy.

**CEDAR (*Cedrus libani*).** Is found in Bermuda, Virginia, India, Australia, etc., in the swamps of the Florida Peninsula and on the bottomlands of the Red River and its tributaries; the heartwood is of a reddish-brown colour; sapwood, white, straight grained and porous; very light, brittle, and wanting in strength; imported in logs from six to ten inches square.

**CEILING.** The inner roof of an apartment, generally finished with plaster work, and concealing the timbers from the room below; ceilings are either plastered or panelled in wood.

**CEILING FLOOR.** The joisting and ceiling supported by the beams of the roof.

**CEILING JOISTS.** Are small joists which are either mortised into the sides of the binding joists or notched upon and nailed up to the under sides.

**CEILING LIGHT.** A horizontal light in a ceiling usually under a skylight.

**CELERITY.** Is the velocity or swiftness of a body in motion.

**CELESTIAL BLUE.** Is a chemical compound containing alum and other substances.

**CELESTINE.** The native sulphate of strontian.

**CELL.** An enclosed space within the walls of an ancient temple,

prison or convent; the small rude retreat of a hermit; a small cavity.

**CELL.** An apparatus for the generation of electricity by means of chemical decomposition. A simple cell consists of two "elements" and a liquid. A single accumulator is a cell.

**CELLA.** The body, principal part, or central chamber in a temple.

**CELLAR.** The lower storey of a building wholly or partly under the level of the ground.

**CELLARINO.** That part of the capital in the Roman, Doric and Tuscan orders which is below the annulets under the ovolo.

**CELLULAR BEAM or GIRDER.** That in which wrought iron plates are riveted with angle irons in the form of a series of longitudinal cells with occasional struts.

**CELT.** A cutting or cleaving implement of stone or bronze; found in ancient barrows.

**CEMENT.** Is an adhesive substance for making bodies, especially stones, cohere; the chief cements now in use are Roman, Portland, Reen's and Martin's. The two latter are only used for internal work as they will not stand the action of the weather, because, like all pure limes, they are partly soluble in water.

**CEMENT CONCRETE.** Generally consists of four parts broken brick, two parts sand to two parts cement; concrete made in this way is generally used for cellar floors, stables, etc.

**CEMENT FILLETING.** A narrow strip of cement used in common work instead of lead flashing.

**CEMENT MORTAR.** Is that in which cement is substituted for the lime.

**CEMENTATION.** Is the process adopted in producing blister steel; it consists of placing bars of the purest wrought iron (generally Swedish iron) in a furnace between layers of charcoal powder and subjecting them to a high temperature for about five to fourteen days according to the quality of steel required.

**CENOTAPH.** A monument erected

to the memory of a person buried in another place.

**CENOTAPHIUM.** A cenotaph, or honorary tomb.

**CENSITORES.** Surveyors of the Roman aqueducts.

**CENTAUR.** A mythological figure, half man and half horse, conceived by the Greeks as embodying their idea of the relation between the spiritual and animal in man and nature.

**CENTERING.** The temporary wooden structure used to support an arch during its erection.

**CENTIGRADE.** Divided into a hundred degrees.

**CENTRAL FORCES.** The two antagonist forces (the so-called centrifugal and centripetal) under whose action bodies revolve round a central point.

**CENTRAL TOWER.** A tower in which the plan of the church is cruciform.

**CENTRE or CENTER.** Any timber frame for supporting an arch during its erection; usually made of slabs of wood about one inch thick, except where they are wanted very large, then they are made out of scantlings, the size of which depends upon the weight they have to bear.

**CENTRE BIT.** A tool for boring cylindric holes in wood; used with a brace.

**CENTRE CHUCK.** A chuck which can be screwed on the mandrel of a lathe; it has a hardened steel cone or centre fixed in it; a projecting arm or driver.

**CENTRE HUNG.** In joinery, said of a sash when hung vertically on pivots, and sometimes when hung horizontally on centres.

**CENTRE-NAILED.** A term applied to slates when nailed near the centre.

**CENTRE OF ATTRACTION OF A BODY.** Is that point into which, if all its matter were collected, its action upon any remote particle would still be the same as it is while the body retains its own proper form.

**CENTRE OF A CIRCLE.** In geometry, that point in a circle which is equidistant from every point of the circumference.

**CENTRE OF A CONIC SECTION.** Is that point which bisects any diameter, or that point in which all the diameters intersect each other.

**CENTRE OF FRICTION.** Is that point in the base of a body on which it revolves.

**CENTRE OF GRAVITY.** The point about which the parts of a body, when left free, exactly balance each other.

**CENTRE OF GYRATION.** Is that point in a body revolving on an axis, into which, if the matter of the whole body were collected, the same angular velocity would be generated by the same moving force.

**CENTRE OF MOTION.** Is a fixed point about which a body is moved.

**CENTRE OF OSCILLATION.** Is the point in which the whole of the matter must be collected in order that the time of oscillation may be the same as when it is distributed.

**CENTRE OF PERCUSSION.** Is that point of a revolving body which would strike an obstacle with the same force as if the whole of matter were collected in it.

**CENTRE OF POSITION.** In mechanics, is a point of any body, or system of bodies, so selected that we may properly estimate the situation and motion of the body or system by those points.

**CENTRE OF PRESSURE.** Is that point against which a force being applied, equal and contrary to the whole pressure, it will sustain it, so that the body pressed on will not incline to either side.

**CENTRE OF PRESSURE IN A WALL.** Is that point in the back of the (retaining walls, etc.) wall, above and below which there is an equal amount of pressure. This has been found by experiments and calculations to be at about two-thirds of the vertical height of the wall from the top.

**CENTRE OF SPONTANEOUS ROTATION.** Is that point which remains at rest the instant a body is struck, or about which the body begins to revolve.

**CENTRE PHONIC.** In acoustics, the place where the speaker stands in

making polysyllabical and articulate echoes.

**CENTRE PHONOCAMPTIC.** In acoustics, the place or object which returns the voice.

**CENTRE PIECE.** A plaster ornament for the centre of a ceiling.

**CENTRE-PIECE or CENTRE FLOWER.** A plaster ornament for the centre of a ceiling.

**CENTRE-PIN or CENTRE-POINT HINGE.** Is a hinge consisting of a pivot and socket, which is fixed on the top or bottom of a door.

**CENTRE POINT HINGES.** Pivot and socket hinges which are fastened on the top and bottom edges of the door.

**CENTRE-PUNCH.** A small piece of steel with a hardened point at one end.

**CENTRES.** In turnery, are the two cones with their axes horizontally posited for sustaining the body while being turned.

**CENTRES OF A DOOR, WINDOW, etc.** The two pivots or pins on which it revolves.

**CENTRIFUGAL FORCE.** Is the force by which a body moving round another body in a curve tends to fly off from the axis of its motion.

**CENTRIFUGAL PUMP.** A machine for raising water by centrifugal force, combined with the pressure of the atmosphere.

**CENTROLINEAD.** An instrument for drawing lines converging to a point at any required distance, whether accessible or inaccessible.

**CERAMICS.** A term for all the varieties of baked or burnt clay.

**CEREALS.** Plants bearing grain.

**CERITE.** The silicate of cerium.

**CERIUM.** A greyish-white metal, brittle, and volatile in a very intense heat; discovered in 1803 by Berzelius.

**CEROMA.** An ancient apartment where the bathers and wrestlers were anointed with oil, etc.

**CERTOSA.** A monastery or church of Carthusian monks.

**CERULIN.** Indigo dissolved in sulphuric acid.

**CERUSE.** White lead; a carbonate of lead.

**CERUSITE.** Carbonate of lead.

**CESSIONARY BANKRUPT.** One who has surrendered all his effects for division among his creditors.

**CESSPOOL.** A cavity sunk below the level of a drain to receive and retain the sediment which would otherwise choke the drain; also called "cesspit".

**CESSPOOL.** The receptacle into which the rainwater from a lead gutter flows, and from which it passes to the down pipe.

**CEYLANITE.** A variety of spinel.

**CHABASITE.** A mineral allied to zeolite.

**CHAFERY.** In ironworks, a forge in which the metal is subjected to a welding heat and wrought into bars.

**CHAFFER PAN.** A plumber's chaffer for melting lead and heating soldering irons.

**CHAIN.** A measure of length, used in measuring or surveying land; it is known as "Gunter's chain," and contains four poles, twenty-two yards or sixty-six feet in length; it is divided into 100 equal parts called links, each link being 7.92 inches long.

**CHAIN BOND.** Is a term sometimes applied to the bond timbers placed in one or more tiers in the walls of each storey of a building and serving not only as a tie, but a means for nailing the finishings to; a bonding course of timber or large stones.

**CHAIN BRIDGE.** A suspension bridge.

**CHAIN MOULDING.** An ornament of the Norman period carved in imitation of a chain.

**CHAIN PUMP.** An hydraulic machine, consisting principally of a long chain equipped with a number of buckets, lowered and raised by means of wheels.

**CHAIN RIVETING.** Consists of lines of rivets parallel to one another on each side of the joint and in the direction of the stress.

**CHAIR.** An iron socket which supports and secures the rails of a railroad; an iron socket for holding the lower end of an iron principal;

the lower half of the socket of a drain pipe having separate sockets is called the "chair".

**CHAIR AND SADDLE PIPES.** Drain pipes which have no sockets, the adjacent ends of which are joined by lying in a "chair" and being covered by a "saddle".

**CHAIR RAIL.** Is a horizontal rail fixed round the walls of a room, about three feet from the floor, to keep the plaster from being injured by the backs of chairs; also applied to a strip of wood fastened at the junction of the skirting with the floor.

**CHAITYA.** An Indian temple or hall of assembly.

**CHALCEDONY.** A quart stone of several varieties and of various colours.

**CHALCEDONYX.** A variety of agate.

**CHALCIDICUM.** Among the Romans, a large, low, and deep porch, covered with its own roof, supported on pilasters, and appended to the entrance front of a building.

**CHALCIDRIA.** Chambers attached to a basilica; generally built at one end when the situation would allow.

**CHALCOGRAPHY.** The art of engraving on copper or brass.

**CHALET.** A Swiss hut or cottage.

**CHALICE.** A communion cup; the cup used for the wine at the celebration of the Eucharist.

**CHALK.** A carbonate of lime.

**CHALK LIME.** Is a fat lime of a bright buff colour; it slakes rapidly, and contains about 98 per cent. of calcium carbonate; it is obtained from the upper chalk beds in the south of England.

**CHALYBEATE.** Impregnated with iron; water or a liquor into which iron enters.

**CHALYBITE.** An ore of iron, chiefly carbonate.

**CHAMBER.** An apartment or room; a bed-chamber.

**CHAMBER OR CAMBER OF A BEAM.** Is the convexity upon the upper edge of it, in order to prevent its becoming straight or concave by its own or any weight it may have to sustain.

**CHAMBER BEAMS.** Are those used in the flats of truncated roofs, and raised in the middle with an obtuse angle for discharging the rain water towards both sides of the roof.

**CHAMBER OF A LOCK.** In canals, the space between the gates in which the vessels rise and sink from one level to another in order to pass the lock.

**CHAMBER OF A MINE.** The place where the powder is fixed.

**CHAMBRANTE.** An ornament, in masonry and joiners' work, which borders the sides of doors, windows and chimneys.

**CHAMFER.** An edge or rectangular arris taken off equally on the two sides which form it, so as to leave a narrow flat surface (the chamfer) at an angle with each of the faces; if the arris or chamfer is taken off more on one side than the other, it is said to be splayed or bevelled.

**CHAMFERING.** The act or process of making a chamfer.

**CHAMP.** The flat surface of a wall.

**CHAMPAIGN.** A flat, open country; open; level.

**CHAMPAIN LINE.** In ornamental carved work, formed of excavations; it is the line parallel to the continuous line, either ascending or descending.

**CHAMPE or CHAMP.** The field or ground on which carving is raised.

**CHAMPION'S BLACK PAINT.** Is a compound of lampblack, mineral matter and oil.

**CHANCEL.** That part of a church where the altar is; usually railed off and separated from the nave and other portions of the church by the chancel screen.

**CHANCE'S STONE.** Is an artificial stone made by melting Rowley rag or similar rock.


**CHANDELIER or PENDANT.** A hanging frame with branches for a number of lights.

**CHANDELIER.** In fortifications, a kind of movable parapet.

**CHANDRY.** An apartment in a prince's house, palace or royal dwelling for depositing candles and other lights.

**CHANNEL.** A groove; a river-bed; a water-course.

**CHANNEL.** In architecture, perpendicular channels, cavities, grooves or flutings, cut along the shaft of a column or pilaster; a long gutter or canal sunk below the surface of a body.

**CHANNEL IRON.** Wrought iron of a double right-angled section, thus, 

**CHANNELLED.** Grooved lengthways.

**CHANNEL OF THE LARMIER.** See Canal of the Larmier.

**CHANNEL OF THE VOLUTE.** See Canal of the Volute.

**CHANNEL PIPE.** A pipe lying in an open channel and generally only half round in section.

**CHANNEL TILE.** In Italian, or similar tiling, the lower one.

**CHANTLATE.** A piece of wood fastened near the ends of the rafters, and projecting beyond the wall, to support two or three rows of tiles; so placed to prevent the rain from trickling down the walls.

**CHANTRY.** A little chapel in ancient churches with an endowment to provide for the chanting of masses.

**CHANTRY CHAPEL.** A chapel connected with a monument or tomb, in which masses were to be chanted; usually of small size, and very rich in decoration.

**CHAPEL.** A place of worship connected with, but subordinate to, a church; a place of worship in a palace or private dwelling, a dissenters' place of worship.

**CHAPEL OF EASE.** An extra church in a large parish, built for the accommodation of an increasing population.

**CHAPTER.** The capital of a column.

**CHAPLET.** In architecture, a small ornament carved into round beads, etc.

**CHAPLET.** See Core Nail.

**CHAPS.** The mouth or jaws of a vice, pair of tongs or pliers.

**CHAPTER HOUSE.** In ecclesiastical architecture, that part usually attached to a cathedral or collegiate church in which the deans and canons assemble to transact business.

**CHAPTREL.** A capital supporting an arch.

**CHAR** or **CHARE.** To hew; to work charred stone; hewn stone; to reduce to charcoal.

**CHARCOAL.** Consists mainly of carbon procured from the decomposition of wood by burning.

**CHARCOAL IRON.** Wrought iron of a very pure description, charcoal being used instead of coke in its manufacture.

**CHARE.** A narrow street or court.

**CHARGE.** In electricity, a quantity of electrical fluid communicated to a Leyden jar, etc.

**CHARGE.** In mining, any quantity of ore put at one time into a furnace to fuse is called a "charge"; letting it out is called "tapping".

**CHARGE CIRCUIT.** In electricity, the circuit through which the current passes when the accumulators are being charged. That which takes in the lamp is termed the "dis-charge".

**CHARGED.** Implies that one member of a piece of architecture is sustained by another; a frieze is said to be "charged" with the ornament cut upon it.

**CHARGE OF LEAD.** Thirty-six pigs each containing six stone, wanting two pounds each.

**CHARLTON ENAMELS.** Are preparations of Charlton white and gums, which dry with a smooth hard surface and do not crack or blister.

**CHARLTON WHITE.** Is a mixture of sulphate of zinc with sulphate of baryta or strontia.

**CHARNEL HOUSE** or **CHARNEL CHAMBER.** Is a place to receive the human bones disinterred by the gravedigger.

**CHARRING.** Is a method used for the preservation of timber (usually posts and piles); it consists of slightly burning the ends placed in the ground.

**CHARTER LAND.** Land held by charter.

**CHARTOPHYLACIUM.** A recess; an apartment for the preservation of records or valuable writings.

**CHARTREUSE.** A celebrated monastery of Carthusians in France.

**CHASE.** A channel formed or cut in brickwork or masonry; an upright indent cut in a wall for the joining another to it.

**CHASE.** A wide groove; to emboss; to cut into the form of a screw.

**CHASE BAND.** A form of bond used in small stone chimney stacks, in which each stone has one fair end only.

**CHASE MORTISE** or **PULLEY MORTISE.** Is one having a bevelled sinking leading into it; chiefly used where the timber having the mortise in is fixed in position, and another timber has to be inserted at right angles to it.

**CHASER.** A term sometimes applied to a handrail punch; a tool used in screw cutting.

**CHASE WEDGE** or **SET.** Is a wedge, the thin edge being about four inches long, made of box or beech with a short handle for holding and striking; used for dressing lead into angles.

**CHASING.** A raglet or groove; the art of embossing on metals.

**CHÂTEAU.** A castle; a country seat.

**CHATELET.** A little castle; the common gaol and mansion house in the city of Paris.

**CHATTERING BELL.** An electric or pneumatic bell which gives repeated strokes.

**CHAUFFER.** A small iron furnace.

**CHECK.** In the north of England, a rebate; a weather "check" for windows is usually a piece of stuff three inches wide and as thick as the stop bead is wide, with a bead worked on each edge, the one on the top edge being the same size as the stop bead which mitres into it; the check is tongued into the top of the sill; also applied to boards that have a tendency to warp or "check".

**CHECK PLATE.** Same as Bearing Plate.

**CHECK PLATES.** Are levelled washers; used to present square bearings to straps, bolts, etc., when inclined.

**CHECK SPRING.** A spring for drawing back a bell wire after it is pulled to ring the bell.

**CHEEKS.** The shears or bed of the lathe as made with two pieces for conducting the puppets.

**CHEEKS.** Two upright equal and similar parts of any piece of wood-work, such as the sides of a dresser, dormer window, etc.

**CHEEKS.** The sides of a mortise ; the sides of a kitchen range or grate.

**CHEESE-HEADED SCREW.** A screw with a large cylindrical head, slit for a screw-driver.

**CHEKOA.** A Chinese porcelain clay.

**CHEMISE.** In fortifications, a wall that lines the face of an earthwork.

**CHEMITYPE.** The art of producing by chemical means an engraving in relief on a metal plate.

**CHEQUERED PLATE.** An iron plate having diagonal grooves upon its surface to prevent it getting slippery when worn.

**CHEQUERS.** In masonry, are stones in the facings of walls, which have all their thin joints continued in straight lines, without interruption or breaking joints.

**CHERRY TREE.** A hard, close-grained wood, of a pale red-brown colour.

**CHERT.** A kind of flint ; horn-stone.

**CHEST.** Same as Caisson ; a large box.

**CHESTER.** A Saxon term for a castle.

**CHESTNUT** (*Castanea vesca*). Is found in England, Africa, North America and the south of Europe ; it is of a dark brown colour with no distinct large medullary rays ; very durable ; no sapwood, and does not shrink or swell much.

**CHEVAL.** A support or frame.

**CHEVAL-DE-FRISE.** In fortifications, a military fence composed of a piece of timber armed with long spikes.

**CHEVAL GLASS.** A large swing glass mounted on a frame.

**CHEVET.** A variety of apse ; the termination of a church behind the high altar when of a semi-circular or polygonal form.

**CHEVET.** The French name for an apse when surrounded by chapels.

**CHEVRON.** Is a zigzag moulding of the Norman style ; also used with the pointed arch.

**CHEVRONED.** Having, or like, a chevron.

**CHIAROSCURO.** A drawing made in two colours, black and white.

**CHILIAGON.** In geometry, a regular plane figure of a thousand sides and angles.

**CHILIAHEDRON.** A figure of a thousand equal sides.

**CHILLED CASTING.** A casting run in an iron mould which chills and hardens the surface.

**CHILLED IRON.** Cast iron, the surface of which has been hardened by the rapid cooling of the casting.

**CHILLS.** A term sometimes applied to the moulds used in lead casting.

**CHILMARK, WARDOUR or TISBURY STONE.** Is a soft, even-grained stone procured from the Portland and Purbeck series of the oolitic formation, near Tisbury Wardour Castle. The varieties are the "trough" or "hard bed," which is a yellowish-brown colour and of a close, even texture ; the "Scott" or "Brown bed," which is of a warmer colour, and the "general bed," which is of a rich yellow tint and fine texture, weathers well.

**CHIMNEY or FLUE.** A passage for the escape of smoke from a fire ; although one of the most important features in a house it is often carelessly constructed. The causes of chimneys smoking are so various that it is almost impossible to lay down a general rule of construction to effect a cure.

**CHIMNEY BAR.** The iron bar used to support the front of the chimney breast over the opening for a fireplace.

**CHIMNEY BOARD.** A fire board.

**CHIMNEY BOND.** Bond consisting entirely of stretchers ; also known as "stretching bond".

**CHIMNEY BREAST.** The projecting part of the wall of a room, containing the fireplace and flues.

**CHIMNEY CAP.** A cowl ; the projecting top courses on a chimney shaft.

**CHIMNEY-PIECE.** An ornamental piece of wood, stone or marble, set round a fireplace; also called "mantelpiece".

**CHIMNEY-POT.** A cylindrical or other shaped pot at the top of a chimney to prevent smoking.

**CHIMNEY SHAFT.** Is defined by the Science and Art Department as a single detached furnace chimney.

**CHIMNEY STACK.** One or more flues rising in a group through the roof of a dwelling house.

**CHINA CLAY.** A finer kind of potter's clay.

**CHINESE ARCHITECTURE.** A style peculiar to China, where the material employed is principally wood.

**CHINESE LAKE.** Is a pigment produced from cochineal.

**CHINESE RED.** Is a pigment consisting of chromates of lead produced by boiling white lead with a solution of bichromate of potash.

**CHINESE YELLOW or KING'S YELLOW.** Is a pigment made from a very bright sulphuret of arsenic brought from China; it injures several other colours if mixed with them; it is not durable and is a dangerous pigment to use in internal work.

**CHINK.** A narrow aperture; a cleft or rent.

**CHISEL.** An edged tool to cut or hew with, of different quality and form according to its use.

**CHISEL DRAUGHT or DRAFT.** Consists of knocking off the superfluous stone along one edge of the block until it coincides with a straight edge throughout its whole length, and repeated where required; adopted by masons in bringing stone to a plane surface.

**CHISELLED WORK.** The state of stones whose surface is formed by the chisel.

**CHIT.** An instrument for cleaving laths.

**CHLORINE.** A greenish-yellow gas obtained from common salt; a powerful disinfectant and bleaching agent.

**CHLORITE.** A soft, olive-green mineral, soapy to the touch; a salt of chlorous acid.

**CHLORITIC GRANITE.** Contains

chlorite, an olive-green mineral, which is generally granular and of a pearly lustre.

**CHLOROMETER.** An instrument for testing the bleaching powers of chloride of lime.

**CHLOROPHÆITE.** A green mineral which soon becomes black when broken.

**CHLOROPHANE.** A variety of fluor-spar with a bright green phosphorescence when heated.

**CHOANITE.** A fossil zoophyte of the chalk.

**CHOCOLATE LEAD.** A pigment prepared by calcinating oxide of lead with about a third of that of copper, and reducing the compound to a uniform tint by levigation.

**CHOIR.** That part of a church or cathedral eastward of the nave, and separated from the rest of the church by a screen; a large hall adjoining the body of the church, separated by a grate, where the nuns sing the office.

**CHOKE-DAMP.** A suffocating vapour; carbonic acid gas, generated in wells, coal mines and other pits.

**CHOLTRY.** An East Indian inn or caravansary.

**CHONDRODITE.** A mineral, occurring in grains of various colours.

**CHONIKRITE.** A massive white mineral.

**CHOPPING BLOCK.** For axing bricks on; is a block of wood from six to eight inches square, generally raised on a fourteen-inch brick pier to a height of about two feet three inches.

**CHORAGIC MONUMENTS.** A monument erected in honour of the choragus who gained the prize by the exhibition of the best musical or theatrical entertainment at the festivals of Bacchus.

**CHORD OF A CIRCLE.** Is a straight line which joins the ends of an arch; the width of an opening over which an arch has to be built is known as the "chord" or width.

**CHOROBATES.** An instrument used by the Greeks for determining the slope of an aqueduct and the levels of the country through which it was to pass.

**CHORMATE.** A salt of chromic acid.

**CHORMATOMETER.** A scale for measuring colours.

**CHRISMATORY.** A recess resembling a piscina, near the spot where the font originally stood to contain the chrism or holy oil.

**CHROMATICS.** That branch of optics which treats of colours.

**CHROME COLOUR.** A colour from a chromate or one in the form of a powder.

**CHROME GREEN.** Is a pigment which, if made from the oxide of chromium, is very durable; a compound pigment of which chrome yellow is the principal colouring substance.

**CHROME ORANGE.** Is a chromate of lead, brighter than vermilion, but less durable.

**CHROME YELLOWS.** Are chromates of lead obtained by mixing dilute solutions of acetate or nitrate of lead and bichromate of potash; this produces a tint known as "middle chrome," a paler tint is obtained by the addition of sulphate of lead, it is then known as lemon chrome; the addition of caustic lime produces orange chrome of a darker colour.

**CHROMIUM.** A very rare metal found either in the form of chromate of lead or chromate of iron.

**CHRYSOBALAN.** A genus of tropical trees.

**CHUCK.** An appliance used for attaching the work to be turned to the lathe mandrel; the "chucks" used in ordinary turning are the cone screw chuck, the hollow chuck and the prong or strut chuck.

**CHUFFS.** Are bricks full of cracks caused by the rain falling on them while hot; they are practically useless.

**CHUNA.** The term applied to lime in India.

**CHUNAM.** The name in India for lime; stucco made of calcined shells.

**CHURCH.** A consecrated place or building for worship.

**CHURCH BENCH.** A seat in a church porch.

**CHURCH IN ROTUNDO.** A church

whose plan is a perfect circle, in imitation of the Pantheon.

**CHURCH LAND.** Land belonging to the Church.

**CHURCH WAY.** A road that leads to a church.

**CHURCH WORK.** Work for or on a church; work in connection with a church.

**CHURCHYARD.** The ground adjoining a church.

**CHUTE.** A fall as in a rapid for floating timber down; a wood gutter.

**CHYMOL.** A hinge; formerly called a "grimmer".

**CIBORIUM.** An arch supported by four pillars placed over the high altar; the coffer or case in which the host is deposited; an insulated erection, open on each side, with arches, and having a dome of ogee or circular form carried or supported by four columns.

**CIERGE.** A wax candle used in churches and in religious processions.

**CILERY.** The drapery or foliage carved on the heads of columns or pillars.

**CILL.** Same as Sill.

**CIMATIUM.** A term applied to the moulding round the edge of the abacus of a capital.

**CIMBIA.** A fillet or band round the shaft of a column to strengthen it; a fillet-string, list or cornice.

**CIMELIARCH or CIMELLARE.** The room or apartment where the plate and vestments are deposited in a church.

**CIMOLITE.** A species of friable white clay.

**CINCTURE.** A ring, list, fillet or band round the shaft of a column at the upper or lower end, serving to divide the shaft from the capital and its base.

**CINDER or CINDER IRON.** Is an inferior kind of pig iron produced from the slag of the puddling furnace.

**CINNABAR.** Red sulphuret of mercury; native vermilion; dragon's blood; the gum of an Indian tree.

**CINNAMON STONE.** A mineral found in Ceylon, of a cinnamon-red colour, allied to the garnet.

**CINQUE CENTO.** In architecture, the term applied to the revival of art, coeval with the early Tudor style in England and the Renaissance style in France.

**CINQUE CENTO.** Five hundred, or the fifth century; generally applied to the period of the revival of the arts in Italy.

**CINQUE FOIL.** Is a geometrical figure used in tracery; it consists of five lobes or parts of circles joining each other.

**CIPOLIN or CIPOLLINO.** A green marble with white zones like the section of an onion; it is an impure marble which, containing veins of schistose, decomposes and falls off in flakes like the coats of an onion.

**CIPPUS.** A small, low column; sometimes round but more frequently rectangular, without a base or a capital.

**CIRC.** A stone circle.

**CIRCINUS.** A term formerly applied to a pair of compasses.

**CIRCLE.** Is a plain figure comprehended by a single curved line called its circumference, every part of which is equidistant from its centre.

**CIRCLE ON CIRCLE, SPHERICAL WORK, CIRCULAR CIRCULAR WORK.** Or double curvature, as it is more generally called, is when the work is circular on plan and also on elevation.

**CIRCLET.** A little circle.

**CIRCUIT.** A systematic arrangement of conductors which may include lamps, motors, etc., through which a current is passed for lighting and other purposes.

**CIRCULAR BUILDINGS.** Are those built upon a circular plan; it is called a rotunda when the interior is also circular.

**CIRCULAR CIRCULAR WORK.** Same as Circle on Circle. The labour on a spherical or ellipsoidal surface.

**CIRCULAR DIMINISHED WORK.** Refers to work such as columns, etc., which are smaller at the top than at the bottom.

**CIRCULAR GEOMETRICAL STAIR.** Is one built on a circular plan, the converging ends of the steps being self-supporting.

**CIRCULAR LINES.** Lines of sines, tangents and secants, on the plane scale and sector.

**CIRCULAR NEWEL STAIR.** Is one in which the converging steps are supported by a newel.

**CIRCULAR NUMBERS.** Those whose powers terminate in the same digits as the roots.

**CIRCULAR ROOFS.** Those whose horizontal section or plan is circular.

**CIRCULAR STAIRS.** Are those composed of steps contained in a circular or polygonal staircase.

**CIRCULAR SUNK WORK.** Consists of work of a concave or convex form sunk below the surrounding surface.

**CIRCULAR WORK.** That which requires to be worked to a concave or convex form, such as circular heads to windows, doors, etc.

**CIRCULATING CISTERN.** A cistern connected with a system of hot-water pipes and fixed at the highest point of the circuit.

**CIRCULATING DECIMAL.** A decimal in which one or more figures are constantly repeated in the same order.

**CIRCUMFERENCE.** The line that bounds a circle or encompasses any figure; the space enclosed in a circle.

**CIRCUMFERENTOR.** An instrument used by surveyors for taking or measuring angles.

**CIRCUMMURED.** Walled round.

**CIRCUMSCRIBE.** Is to draw a line around a figure, or enclose it so that the enclosed shall be touched on all its angles or on its whole circumference by the line or body that encloses it.

**CIRCUMSCRIPTION.** A circular inscription; the act of circumscribing.

**CIRCUMVALLATE.** In fortifications, to surround with a rampart.

**CIRCUMVALLATION.** Casting up fortifications around a place; a fortification thrown up.

**CIRCUMVOLUTIONS.** The turn in the spiral or volute of the Ionic capital.

**CIRCUS.** An arena, or a large oblong edifice used by the Romans; it had an open space in the centre,

surrounded by tiers of seats, in which public games, sports and combats were exhibited.

**CIRCUS.** A Roman racecourse.

**CISELURE.** Chased work; chasing.

**CISSOID.** A curve invented by Diocles to trisect a plane angle and to construct two geometric means between two given straight lines.

**CISSOID.** A curve invented by Diocles to trisect a plane angle and to construct two geometric means between two given straight lines. The curve consists of two infinite branches above and below the diameter of a circle, at one of whose ends a tangent being drawn, the curve approaches the tangent without ever meeting it.

**CIST.** Wicker work baskets sculptured on ancient monuments; a tomb consisting of rows of stones on edge covered with rough slabs; a chest or basket.

**CISTERN.** A receptacle for water.

**CISTERNA.** An artificial tank or reservoir sunk in the ground and covered in with a roof.

**CITADEL.** A fortress in or near a city.

**CITRINE.** A yellow pellucid variety of quartz.

**CITRINE LAKE.** Is a pigment prepared from the quercitron bark.

**CITY.** A town; an incorporated town; a town having had a bishop's see.

**CITY SOLDER OR PLUMBER'S SEALED SOLDER.** Is that which has been officially stamped by the Plumbers' Company as a guarantee that it is composed of two parts of lead and one of tin.

**CIVERY.** A bay in a vaulted roof.

**CIVIC CROWN.** A garland of oak leaves and acorns; frequently used as an architectural ornament.

**CIVIL ARCHITECTURE.** The art or science of erecting every species of building destined for the use of man.

**CIVIL ENGINEER.** One employed in civil engineering.

**CIVIL ENGINEERING.** The science or art of constructing canals, railroads, docks, etc.

**CLACHAN.** A hamlet; circle of stones.

**CLACK.** The valve of a pump piston; the can lead in Derbyshire.

**CLACK VALVE.** A hinged pump valve.

**CLAMP.** In lime burning, are heaps consisting of alternate layers of limestone and coal, with a fire below, covered with clay or sods to prevent the escape of heat.

**CLAMP.** A narrow piece of wood usually fixed on a wide board to prevent its warping; the fibres of the clamp are generally at right angles to the fibres of the board; the clamp is fixed in various ways, such as nailed or screwed to the back of the board; or it is fixed on the end by means of a mortise and tenon or tongued and grooved to the end, when the board is said to be "clamped".

**CLAMP.** A term sometimes applied to the outside of a brick kiln.

**CLAMP.** A piece of timber or of iron used to fasten work together.

**CLAMP.** A pile of bricks laid up for burning.

**CLAMP BRICKS.** Are bricks burnt in stacks with spaces or flues left at certain intervals throughout the stack; they are then burnt by means of layers of ashes or coke breeze placed near the bottom; flues are then formed leading from the live holes in which the fire is first started.

**CLAMPING.** The act or method of putting on a "clamp" to prevent a board warping.

**CLAMP IRONS.** Irons used at the ends of fires to keep the fuel from falling.

**CLAMS.** A kind of smith's tongs.

**CLAP BOARDING.** A variety of oak imported from Norway; it is inferior and distinguished from wainscot by its being full of white-coloured streaks.

**CLAP BOARDING.** A feather-edged board for weather boarding.

**CLASP.** See Medullary Rays.

**CLASP LOCK.** A spring lock.

**CLASP NAILS.** Are those having heads which project downwards, which stick into the wood when driven below the surface, thus holding it together.

**CLASSIC ORDERS.** In architecture, are the Doric, Ionic and Corinthian. Two others are added, the Tuscan and Composite, and the whole of them is classed as "the five orders of architecture".

**CLATHRI.** In ancient architecture, were bars of iron or wood used to secure doors or windows.

**CLAUSTHALITE.** A seleniuret of lead.

**CLAUSTRAL.** Relating to a cloister; like a cloister.

**CLAUSTURA.** Brushwood for fences and hedges.

**CLAUT.** A scraper.

**CLAW HAMMER.** A hammer with claws to extract nails.

**CLAW TOOL.** Is a chisel used by masons made of various sizes, with teeth cut coarse or fine to suit the texture of the stone; it is used after the punch or point for dressing down the ridges still closer to the face.

**CLAY.** Is a soft, tenacious, plastic earth.

**CLAYING OR PUDDLING.** Is the operation of spreading two or three coats of clay for the purpose of keeping water in a vessel.

**CLAY IRONSTONE.** Is found chiefly in the coal measures of Derbyshire, Staffordshire, Shropshire, Yorkshire, Warwickshire and South Wales. It is a carbonate of iron of a clay-like appearance, and contains pyrites and sulphur; it is therefore a very impure ore.

**CLAY MARL.** A whitish, smooth, chalky clay.

**CLAY PIT.** A pit where clay is dug.

**CLAY PUDDLE.** Consists of working clay about in layers of about nine inches thick with sufficient water to make it pasty; mixed or kneaded with a special tool or spade until it becomes a compact mass; if required in large quantities it may be worked up in a pug mill; used to make embankments, reservoirs, coffer-dams, etc., watertight or to protect the backs of arches or walls from the penetration of water.

**CLAY SLATE.** Argillaceous schist; roofing slate.

**CLAY STONE.** An earthy stone

resembling compact or calcareous marl.

**CLEADINGS.** Are stout planks from six to nine inches wide placed upright against the earth at the sides of a trench or excavation. The cleadings are retained in position by horizontal planks called settings which are butted together at the angles and secured by cleats.

**CLEADINGS.** Scaffold boards; laggings nailed across centres.

**CLEAN.** To "clean up" is to smooth up, or sandpaper up stuff, so as to prepare a face for paint, etc.

**CLEAN.** A term applied to timber when it is free from knots; wrought timber.

**CLEANSING CAP.** Same as Trap Screw.

**CLEAR.** In architecture, inside work.

**CLEAR.** The net distance between two bodies, where no other intervenes, or between their nearest surfaces.

**CLEARANCE.** Is the space or waste room between the piston and the end of its stroke and the face of the valve. Its volume or amount is usually expressed in its percentage of the piston displacement.

**CLEARANCE OF ENGINE CYLINDER.** The clearance or clearance volume is the volume bounded by the valve face, the cylinder end, and the piston when at the limit of the stroke nearest the cylinder end. The distance between the cylinder and piston when in the above position is also termed the "clearance".

**CLEAR BORE JOINTS.** (Patent.) Are formed by drifting out the ends of lead pipes sufficiently to admit short brass lining tubes, equal in bore to the pipes themselves, the ends of which are rasped back inside and kept a little apart, leaving a small space to be run in with solder.

**CLEARCOLE.** For walls; consists of white lead ground with water and mixed with size.

**CLEARCOLE.** Thin size applied to woodwork.

**CLEARING THE DEAD.** A term for clearing a shaft or drift, etc.

**CLEARSTORY or CLERESTORY.** An upper storey with a row of windows in a Gothic church, tower or other erection, rising clear above the adjoining parts of the building.

**CLEARSTORY WINDOWS.** Those that have no transom.

**CLEAT.** A small triangular block of wood; used to assist in the fixing of a purlin to a principal; its use is to keep the purlin from canting over.

**CLEAT.** Same as a clamp when fixed to the back of a board.

**CLEAT.** A peg or pin for securing the loose end of a cord; a thin metallic plate.

**CLEAT.** In joinery, a narrow strip of wood nailed on.

**CLEAVAGE.** The fracture or particular manner in which any mineral, having a regular structure, may be cleaved; clay slate is the best example of cleavage.

**CLEAVING.** To forcibly separate one part of a piece of wood or other matter from another in the same direction of the fibres.

**CLEDGE.** The upper stratum of fuller's earth.

**CLEDGY.** Stiff, tenacious, clayey; applied to soil.

**CLEFTS.** Open cracks, fissures or shakes which appear in wood.

**CLEITHRAL.** A covered Greek temple.

**CLEITHROS.** An enclosed place; a temple whose roof covers or encloses it.

**CLENCH or CLINCH.** To "clench" or "clinch" a nail is to hammer down the point of a nail sideways into the wood, when the nail has been driven quite through the timber and projects on the other side.

**CLENCH or CLINCH.** Applied to lead, is to turn the edge of a sheet over the edge of another piece to hold it fast.

**CLEPSYDRA.** A water clock used by the ancients for measuring time, by the running out of a certain quantity of water or sand out of one vessel into another.

**CLERK OF WORKS.** The duties of a clerk of works are to see that the plans and specifications are followed

as far as possible; his position is that of an agent acting for employer and architect; he has to see that the quality of the material and the labour expended is in accordance with the plans and specifications; he is paid by the contractor but employed by the architect. The earliest instance of the term "clerk of works" occurs in 1241, for certain work to be done at Windsor Castle.

**CLEVELAND IRON.** Is produced from ore of the lias formation.

**CLICHY WHITE.** Carbonate of lead obtained by precipitation from the acetate by carbonic acid gas.

**CLICKET.** A knocker; a latch-key; the latch of a door.

**CLINCHING.** The act of bending and driving backward with a hammer the point of a nail after its penetration through a piece of wood.

**CLING.** In the north of England, to "cling" is to shrink.

**CLINKER.** A vitreous cinder or slag formed in furnaces; a vitrified mass of bricks.

**CLINKER.** A term applied to an extra hard description of brick; a kind of hard brick imported from Holland.

**CLINKER or ARCH BRICKS.** Are those which form the tops and sides of the arches in which the fire is built; when burning them they are over-burned and partially vitrified, hard, brittle and weak.

**CLINKSTONE.** A felspathic rock of the trap family, which rings or clinks when struck.

**CLINOMETER.** An instrument for measuring the dip of mineral strata.

**CLIP.** A strip of zinc, lead or copper; used to secure slates when repairing; a socket for joining two lengths of eaves gutter when no socket is provided.

**CLIP AND POLE.** A term applied to a method of scaffolding chimneys. A scaffolding of this description is clipped and lashed in such a manner that, provided the material is good and the workmanship sound, there is no fear whatever of a downfall unless the chimney itself collapses.

**CLOACA.** Ancient term applied to common sewers.

**CLOACA.** A sewer or drain.

**CLOACARIUM.** The sewers rate; a tax formerly levied in Rome for the cleansing and repairing of the sewers.

**CLOAK ROOM.** A room for laying aside cloaks, etc.

**CLOD.** A lump of earth or clay; a mass of earth and turf; any mass concreted.

**CLOISONNE.** Enamel work produced in China and Japan in which the coloured parts are separated by metallic partitions.

**CLOISTER.** A covered way enclosing a quadrangle; a covered, arched or roofed walk round the walls of certain parts of a monastery or college.

**CLOISTER-GARTH.** A court girt by a cloister.

**CLOSE.** The confines of a cathedral or abbey; an enclosure or place fenced in; an entry from a street; a blind alley.

**CLOSE CUT HIP.** In slating, a hip where the slating meets without being covered with lead or a special hip covering.

**CLOSE END.** A term applied in the north of England to a stopped end for an eaves gutter.

**CLOSE PICKED, FINELY PICKED, DABBED or DAUBED WORK.** Consists of stone faced with a fine pointed pick or a serrated pick.

**CLOSE PILES.** Are square timbers driven in the soil in close contact to enclose a space, to prevent leakage, etc.

**CLOSER.** A brick which on the face of a wall shows only half the width of a header; its use is to get a bond, *i.e.*, to allow bricks in alternate courses to lap one another.

**CLOSER.** In the north of England, a back flap.

**CLOSE ROLLING.** A method in brick burning of placing the dried raw bricks close together in alternate layers of headers and stretchers.

**CLOSE STOVE.** A stove which does not permit the fire to be seen.

**CLOSE STRING.** In staircasing, a string that is not notched or cut out to receive the steps.

**CLOSET.** A small room, or a small recess in the side of a room.

**CLOUGH.** A rock or a hillside; a cleft or ravine.

**CLOUGH or CLOYSE.** A contrivance for retaining or letting out the water of a pond, canal, etc.

**CLOUGH ARCHES or PADDLE HOLES.** Are crooked arches by which the water is conveyed from the upper pond into the chamber of the lock of a canal, by drawing up the clough.

**CLOUR.** In the north of England, to "clour" is to waste.

**CLOUREE.** A kind of mason's hammer used for clouring.

**CLOURING.** A Scotch term for scapple.

**CLOUT NAILS.** Are made in two varieties, fine and strong, with flat, circular heads, with the shanks round under the heads, and the points either tapered or flat; chiefly used for fastening felt, sheet metal, etc.

**CLUB HOUSE.** A house occupied by a club, or in which it holds its meetings.

**CLUB ROOM.** A room in which a club meets.

**CLUB SKEW.** A term applied in the north of England to a knee stone.

**CLUMP.** The compressed clay of coal strata; a thick, short, shapeless piece of wood, or other solid substance.

**CLUNCH.** Indurated clay or chalk marl, found in coal pits next to the coal; stiff, coarse clay.

**CLUSTERED.** The combination of several members of an order penetrating each other.

**CLUSTERED COLUMNS.** Several slender pillars or columns attached to each other so as to form one.

**CLUSTERED SHAFTS.** Grouped so as to form a pier of some mass out of several small shafts.

**CLUTCH.** A contrivance for throwing heavy machinery in and out of gear.

**COACH HOUSE.** A house to keep a coach in; usually attached to a stable.

**COACH OFFICE.** A booking office of a stage coach.

**COACH SCREWS.** Are large, heavy screws with square heads so that they can be screwed home with a spanner or wrench; used where great strength is required, in heavy woodwork, or for fixing ironwork to timber.

**COAK.** A small cylinder of hard wood let into the ends of the pieces to be joined to render the joint more secure. Same as Dowel.

**COAL.** A solid, opaque, combustible substance of vegetable origin found in the earth.

**COAL BED.** A coal stratum, or one containing coal.

**COAL BRASS.** Iron pyrites found in coal.

**COAL FIELD.** A bed of coal; land containing coal strata.

**COAL FORMATION.** A group of strata in which coal is found.

**COAL GAS.** Carburetted hydrogen got from coal.

**COAL MEASURES.** Strata of rocks with beds of coal between.

**COAL NAPHTHA.** Is one of the products produced by the distillation of coal tar; it is purified in a mill with sulphuric acid, the sediment and water being drawn off leaving the pure washed spirit.

**COAL PLATE or GRID.** An iron plate for covering a coal shoot over a coal cellar.

**COAL STONE.** A kind of cannel-coal.

**COAL TAR.** Is produced by heating bituminous coal in close iron vessels; it is a by-product in the manufacture of gas; when coal tar is distilled it produces in various stages coal naphtha, then dead oil or creosote, and, lastly, pitch.

**COAL TAR PITCH.** Is the residue obtained by distilling coal tar.

**COARSE STUFF.** Rough mortar mixed with hair, used for the first coat of plastering.

**COAT.** A thickness or covering of plaster, paint or other work done at one time.

**COBALT.** A brittle metal of a reddish-grey or greyish-white colour, and weak metallic lustre.

**COBALT BLOOM.** Acicular arsenate of cobalt.

**COBALT BLUE.** Is an oxide of cobalt made by roasting cobalt ore.

**COBALT CRUST.** Earthy arsenate of cobalt.

**COBALT GREEN or RINMAN'S GREEN.** Consists of cobalt and ferrous oxide of zinc.

**COBALTINE.** A crystallised sulpharsenide of cobalt of a silver-yellowish colour.

**COBALT VITRIOL.** A sulphate of cobalt.

**COBBLE.** A stone worn round; a boulder; a pebble; a roundish lump of coal.

**COBIRON.** An andiron with a knob at the top.

**COBSTONE.** A large rounded stone.

**COB WALL.** Is a wall built of loam or unburnt clay mixed with straw and moistened with water; it is known in Devonshire and the west of England as "cob building".

**COCCOLITE.** A variety of pyroxene.

**COCHINEAL.** A small insect found chiefly in Mexico, which, when collected in great numbers and killed by the application of heat, and formed into a mass, is used in making red colours, especially crimson and scarlet, and in the manufacture of carmine.

**COCK.** A term sometimes applied to a tap.

**COCK BEAD.** A bead projecting from a flat surface.

**COCKET CENTERING.** Centering with head room above the springing line.

**COCKLE.** A laminated mineral substance of a blackish-brown colour like tin.

**COCKLE STAIRS.** A spiral or winding stair.

**COCK LOFT.** The top loft in the roof.

**COCK SPANNER.** Same as Spanner Handle.

**COCK WATER.** Among miners, a stream of water brought into a trough to wash away the sand from tin ore.

**COCOONERY.** A building or apartment for silkworms when feeding and forming cocoons.

**COCTILES.** According to Pliny, a brick hardened by burning.

**CODDINGS.** Are footings under chimney breasts, so as to spread the weight over a greater area.

**CELESTIN.** A sulphate of strontium; so named from its colour.

**CELUM.** According to Vitruvius, a soffit or ceiling.

**CENACULUM.** In ancient architecture, an eating or supper room; the upper storey; lodgings.

**CENATIO.** A room in the lower part of Roman houses, or in a garden to sup or eat in.

**CENOBIVM.** Anciently, a monastery of monks or friars.

**COFER.** In Cornish mining, a small wooden trough which receives the tin cleansed from its impurities or slime.

**COFFEE TREE.** A wood of a light greenish-brown, close grained and small in stature.

**COFFER.** A square depression in each interval between the modillions of a cornice.

**COFFER.** A sunk panel in vaults and domes, or in the soffits or under side of the Corinthian and Composite cornices; any sunk panel in a ceiling or soffit.

**COFFER.** In fortifications, a hollow trench or lodgment across a dry moat, from six to seven feet deep and from sixteen to eighteen broad.

**COFFER-DAM.** Is a watertight wall; usually constructed of piles, enclosing the site on which the pier of a bridge or other structure surrounded by water is to be erected.

**COFFIN.** In Cornish mining, old workings which were all worked open to grass, without any shafts, by digging and casting up the thin stuff from one stall of boards to another.

**COFFIN BOARDS.** Is the name given to a plain board made about

an inch larger all round than the coffin it has to cover; ledges are fixed on the underside and rest on the coffin, thus keeping the coffin board clear of the name plate and ornaments; its object is to protect the coffin from damage and also to form a resting place when the grave is reopened and another coffin placed there.

**COG.** The tooth of a wheel by which it drives another wheel or body.

**COGGLE STONE.** A pebble; a cobble stone.

**COGGING.** A method of joining a joist to a wall plate, in which two notches are cut in the plate, leaving a projection which fits into a notch in the joist.

**COG WHEEL.** A wheel furnished with cogs.

**COHESION.** Is the force by which component parts of a body adhere to each other.

**COIGN.** A corner; a corner stone; a quoin; a wedge.

**COIL.** A close collection of pipes in series, that the heat from a long length of pipe may be concentrated in a small space.

**COIN.** A kind of die, cut diagonally, after the manner of a flight of stairs.

**COKE.** Coal deprived of its volatile matter by fire.

**COLARIN.** The little frieze of the capital of the Tuscan and Doric column, placed between the astragal and the annulets.

**COLCOTHAR.** The brown-red peroxide of iron obtained from sulphate of iron.

**COLD BLAST.** In iron smelting, consists of using the air at its ordinary temperature for the blast.

**COLD CHISEL.** A chisel for cutting iron when cold.

**COLD RIVETING.** Is a method of driving in the rivets cold and clenching them.

**COLD ROLLED IRON.** Consists of bars and plates rolled cold under a great pressure; this increases their tensile strength, reduces their ductility and produces a polished surface.

**COLD SHORT IRON.** Iron in an impure state.

**COLD SHUT.** A defect in a casting caused by two streams of melted metal meeting together but not uniting into one mass.

**COLLAR.** In turnery, a ring inserted in the puppet for holding the end of the mandrel next the chuck, in order to make the spindle run freely and exactly.

**COLLAR.** A ring, cincture or astragal.

**COLLAR OF COLLAR BEAM.** A horizontal piece of timber connecting and bracing two opposite rafters.

**COLLAR or COLARINO.** The astragal of a column; a ring or cincture; it is sometimes called the neck, gorgerin or hypotrachelium.

**COLLAR ROOF.** Is a roof used for spans from twelve to eighteen feet; the pitch is usually one-third the span; a collar roof consists of two principal rafters with a horizontal piece or collar fixed about half way up.

**COLLARS.** Are short pieces of clay pipe sometimes used to cover the joints of each pair of straight drain pipes so as to give the ends a firmer bed.

**COLLAR TOOL.** A swage used in forging a collar.

**COLLECTIONS.** In quantity taking, the collection of the several lengths of items of similar nature, and added together in one dimension as the different lengths of walls in a building of a similar height and thickness but situated in various parts of the same building.

**COLLEGE.** A house, edifice or building appropriated to the use of a college.

**COLLEGIATE CHURCH.** One that has no bishop's see but has its college of dean, canons and prebends, and is regulated, in matters of divine service, as a cathedral.

**COLLUVIARIUM.** Anciently, a well or opening formed at intervals in the channel of an aqueduct for procuring a free current of air along its course.

**COLOGNE EARTH.** Is a native pigment of a violet-brown colour,

similar to Vandyke brown in its uses and properties as a colour.

**COLOEITE.** An intestine-like fossil.

**COLONELLI.** The Italian name for the posts used in any truss framing.

**COLONNADE.** Any series or range of columns placed at certain intervals; the space between the row of columns and the building being generally roofed over; the columns generally support an entablature.

**COLOPHONY.** Common rosin.

**COLOSSEUM.** A term applied to Vespasian's amphitheatre at Rome, which was the largest in the world; also the name of a building in Regent's Park.

**COLOSSUS.** The gigantic statue of Apollo which stood astride at the harbour of Rhodes; esteemed one of the seven wonders of the world; a statue of gigantic dimensions, or very much beyond the proportions of nature.

**COLOUR.** Consists of five classes, they are the neutral, the semi-neutral, the primary, the secondary and the tertiary. The neutral colours are white, black and grey. The primary colours are red, yellow and blue. The secondary colours are purple, orange and green. The tertiary colours are russet, olive and citrine.

**COLOUR.** To "colour" is generally understood to mean colouring in distemper.

**COLOUR.** See Hue.

**COLOURING.** Is made by mixing naturally coloured earths (such as ochres) with whitewash; used for very common work.

**COLUMBARIUM.** Literally, a pigeon house; a Roman sepulchre built in many compartments.

**COLUMBARY or COLUMBARIA.** A chamber fitted up with small niches like pigeon holes; used by the Romans for the urns with the ashes of their dead; holes left in walls for the insertion of pieces of timber.

**COLUMBITE.** The ore of columbium.

**COLUMBIUM.** A metal discovered in 1801, and obtained from columbite; niobium.

**COLUMELLE.** A term sometimes applied to balusters.

**COLUMN.** The term applied to the upright timbers of a roof, same as the modern king posts.

**COLUMN.** In architecture, is a pillar of a cylindrical form; it consists of a base, a shaft or body and a capital.

**COLUMN.** A cast-iron column when of circular section; when of a rectangular section it is called a stanchion or pillar.

**COMB.** A thin piece of steel; used by painters for graining, which when done with the comb is known as "combing".

**COMBED.** The term applied to the finishing off of mouldings in limestone with a comb or drag.

**COMBE DOWN STONE.** Is of a light colour found in beds from one to five feet thick; that coming from Lodge Stile Combe quarry is said to weather well in smoky atmospheres or sea air.

**COMBINED DRAIN.** Is one through which sewage and rain-water flow.

**COMBINED DRAINAGE.** In London "combined drainage" means two or more houses drained by one common drain from the premises to the sewer.

**COMITUM.** A building which stood in the Roman forum, where-in assemblies of the people were held.

**COMMERCIAL SOLDER.** Is the term applied to solder sold by dealers and lead merchants.

**COMMISSURE.** The joint between two stones, or the application of the surface of one stone to the surface of another.

**COMMODE STEPS.** In staircasing, are diminished steps at the bottom or starting.

**COMMON or PULP PAPER.** Paper whose body is of the general surface colour.

**COMMON or TRUE GRANITE.** Consists of crystals of quartz and felspar mixed with particles of mica.

**COMMON CENTERING.** That constructed without trusses, but having a tie beam at its ends; that employed in straight vaults.

**COMMON COLOURS.** Are white, black, red (red lead or Venetian red), yellow (ochre and intermediate colours are those used in painter's work).

**COMMON GROUNDS.** Are those halved together or notched. See Framed Grounds.

**COMMON JOISTS.** Those in single naked flooring to which the boards are fixed.

**COMMON PITCH.** An old term still applied by country workmen to a roof in which the length of the rafters is about three-fourths of the entire span.

**COMMON RAFTERS or SPARS.** Are inclined timbers for supporting the roof covering.

**COMMON ROOFING.** Consists of common rafters only, which bridge over the purlins in a strongly framed roof.

**COMMON RUBBLE.** See Uncoursed Rubble.

**COMMON STUCCO.** In plastering, is composed of three parts of very fine sand to one part of hydraulic lime.

**COMMON VARNISH.** Consists of dissolving resin under a gentle heat in linseed oil and gradually adding turpentine.

**COMMUNICATION DOORS.** Those which, when open, throw two apartments into one.

**COMMUNICATION PIPE.** Is the main pipe from the street main to the cistern, draw-off tap or meter in the building.

**COMMUNION TABLE.** The altar table; usually placed near the wall of the east end of the chancel, and enclosed by rails.

**COMMUTATOR.** A mechanical device for changing the direction of the electric current, automatically or otherwise. In a continuous current machine it consists of alternate slabs of copper (or other conductor) and mica (or other insulator) clamped together to form a true cylinder, from whence the current is collected by brushes.

**COMPARTED.** Anything which is divided into several parts is said to be comparted.

**COMPARTITION.** The distribution of the ground plot of an edifice into the various passages and apartments; the act of dividing into parts; the parts divided; a separate part.

**COMPARTMENT.** A subdivisonal part; a division or separate part of a general design; a division partitioned off.

**COMPARTMENT CEILING.** One divided into panels which are generally surrounded by mouldings.

**COMPASS.** A mathematical instrument with two legs movable on a joint; for drawing circles and measuring distances.

**COMPASS BRICKS.** Are those having one edge shorter than the other; they are used in lining shafts, etc.

**COMPASS-HEADED.** In ancient architecture signifies circular.

**COMPASS PLANE.** A joiner's plane of a convex form; used for smoothing concave surfaces.

**COMPASS ROOF.** A span roof, in which the rafters are inclined so as to form a sort of arch, thus, **A**.

**COMPASS SAW.** A saw with a narrow blade; used for sawing circular work.

**COMPASS TIMBER.** Curved timber; bent trees at least five inches out of straight in a length of twelve feet.

**COMPASS WINDOW.** A bay window or oriel.

**COMPASS WORK.** Circular work.

**COMPLEMENT.** The number of degrees which any angle wants of a right angle.

**COMPLEMENTARY COLOURS.** Are those that are wanting to make up white.

**COMPLUVIUM.** An area in the centre of the ancient Roman houses; the gutter or eaves of a roof; the interval between the roofs of porticoes which surround the *cavædium*.

**COMPLUVIUM.** The open space or the middle of the roof of a Roman atrium.

**COMPO.** A mixture of Roman cement and sand; used for external plastering.

**COMPO.** "Compo sand" in some parts of the country means a mixture of very fine shingle and sea sand; "compo gas pipe" is a mixture of tin and lead.

**COMPO PAINT (Wood's).** Is really more of a coloured varnish than a paint; it contains neither driers, oil or turps; dries rapidly with a bright gloss, which will not crack or blister in the sun; one coat on bare iron, wood or stone is equal to two of ordinary paint; well adapted for outdoor work.

**COMPOSITE ARCH.** The same as the pointed or lancet-shaped arch; a pointed arch, the outline of which is composed of arcs of circles drawn from different points either inside or outside the span.

**COMPOSITE NUMBERS.** Are such as can be divided by some other number greater than unity; whereas prime numbers admit of no such divisor.

**COMPOSITE ORDER.** An order of Roman architecture, which combines the features of the Ionic and Corinthian orders; in the Composite and Corinthian capitals the feet of the lower leaves should not project beyond the upper part of the column.

**COMPOSITION NAILS.** Are made in various shapes according to the purpose for which they are required; they are made of different alloys to avoid corrosion, etc.

**COMPOSITION OF FORCES.** The combination or union of several forces for determining the result of the whole.

**COMPOSITION OF LINE.** In design, refers to the principle of harmonious relation of one line to another.

**COMPOST.** Same as Compo.

**COMPOUND or CLUSTERED PILLARS.** Consist of a central mass or body, around which are arranged several smaller shafts or columns or pillars.

**COMPOUND ARCH.** Is a term applied to signify a recessed arch; an arch which the archivolt moulded and formed into a series of square recesses and angles.

**COMPOUND PIER.** A term sometimes applied to a clustered column.

**COMPOUND WALLS.** Are those constructed externally of stone and internally of brick, or *vice versa*.

**COMPRESSIBILITY.** The quality of bodies which permits of their being reduced to smaller dimensions.

**COMPRESSIBLE or COMPRESSIVE STRESS.** A beam, etc., is said to be in compression when the stress has a tendency to produce a strain by shortening or squeezing it.

**COMPRESSION.** Is the result caused by the action of the piston in compressing into the clearance space the steam remaining in the cylinder after the exhaust valve closes.

**CONCAMERATA SUDATIO.** A room in the ancient gymnasium between the lanicum or stove and the warm bath.

**CONCAMERATE.** To arch over; to vault.

**CONCAMERATIO.** Arched work.

**CONCAVE.** A term used to denote the curvilinear vacuity of hollow bodies.

**CONCAVITY.** The internal surface of a hollow spherical body.

**CONCAVITY OF A CURVE LINE.** Is the side between the two points of the curve next its chord or diameter.

**CONCAVO-CONCAVE.** Concave on both surfaces.

**CONCAVO-CONVEX.** Concave on one side and convex on the other.

**CONCENTRIC.** Having a common centre as the radii of a circle, or as concentric circles, ellipses, etc.

**CONCH.** The vault of an apse.

**CONCHA.** A term sometimes applied to the concave ribless surface of a vault.

**CONCHITE.** A fossil or petrified shell.

**CONCHOID OF NICOMEDES.** Is a curve continually approaching a straight line without meeting it, though ever so far produced; invented by Nicomedes the mathematician for solving the two problems, the duplication of a cube and the trisection of an angle.

**CONCLAVE.** A private or inner room for meeting privately.

**CONCRETE.** Is a mixture of sand, pebbles, gravel or other material,

with lime or cement; grey limestone is usually used in making concrete.

**CONCRETE LINTELS.** Consist of six parts of breeze from gas-works to one part of Portland cement, made to the length and section required.

**CONDENSATION.** The conversion of vapour into water by cold.

**CONDENSATION GUTTER.** A gutter formed at the bottom of a skylight to take off the condensation of the glass.

**CONDENSER.** A pneumatic engine or syringe in which air may be compressed.

**CONDENSER.** An apparatus which takes a small charge of electricity which it will give out again; but it is quite different in action to the accumulator; it is used in long distance telegraphy and other purposes.

**CONDITORIUM.** A secret place; a sepulchre; a vault.

**CONDUCTOR.** A lightning rod.

**CONDUCTOR.** Any material, generally metal, which will conduct electricity as apart from the insulator.

**CONDUIT.** A pipe or channel to convey water or fluid; a long narrow walled passage underground for secret communication between different places, or between the underground apartments of a building.

**CONDURRITE.** An ore or oxide of copper.

**CONE.** A solid body or figure tapering to a point from a circular base.

**CONE OF DEPRESSION, EXHAUSTION or COLLECTION.** The imaginary figure enclosing the underground region from which water will flow into a particular "shallow" well. It varies with the nature of the soil.

**CONE PLATE.** A strong plate of cast iron fixed vertically to the bed of a lathe, with a conical hole in it, to form a support for the end of a shaft which it is required to bore.

**CONFESSIONAL.** A small cell, recess or seat in which the priest sits to hear the confessions of penitents.

**CONFIGURATION.** The exterior form or superficies of any body.

**CONGE.** Same as Apophyge.

**CONGLOMERATE.** A rock composed of pebbles cemented together.

**CONICAL POINTS.** In turnery, the cones fixed in the pillars for supporting the material to be turned; the one on the right hand is called the "fore centre," and the one on the left the "back centre".

**CONICAL ROOF.** One whose exterior surface is shaped like a cone.

**CONICO - CYLINDRICAL.** In the form of a cylinder but tapering to a point.

**CONICS.** That part of geometry which treats of the cone, and the curves which arise from its sections.

**CONIC SECTION.** A curve line formed by the intersection of a cone and plane.

**CONIC SECTIONS.** The parabola, the hyperbola, the ellipse and the circle.

**CONISSINET.** The stone which crowns a pier, or that lies immediately over the capitals of the impost, and under the sweep.

**CONISTERIUM.** A room in the gymnasium and palestra of the ancients, wherein the wrestlers having been anointed with oil were sprinkled over with dust that they might grip each other firmer.

**CONJUGATE DIAMETERS.** The diameters in an ellipsis or hyperbola parallel to tangents at each other's extremities.

**CONNECTING JOINTS.** In joinery, are those such as the mortise and tenon, dovetailing, etc.

**CONNECTING PIECE.** A short piece of wrought iron pipe with a thread cut on one end long enough to allow a socket to screw on its whole depth.

**CONNECTING PLATE.** A short piece of iron pipe having a thread cut on one end, to allow of a socket being screwed on its whole depth.

**CONOID.** A solid formed by the revolution of a conic section about its axis; there are three kinds of conoids, the elliptical, hyperbolic, and the parabolical. These are sometimes called ellipsoid or spheroid, hyperboloid and paraboloid.

**CONSERVATORIE.** A public school of music.

**CONSERVATORY.** A building for preserving curious and rare exotic plants.

**CONSISTORY.** The college of cardinals at Rome; the court of a bishop, held in the cathedral church for the trial of ecclesiastical causes.

**CONSOLE.** An ornamental bracket of stone or plaster; a bracket to support a cornice, etc.

**CONSTANT or BARYTIC WHITE.** Is a sulphate of baryta.

**CONSTANT.** In mathematics, a quantity which remains the same throughout a problem.

**CONSTRUCTION.** The building up from the architect's designs; applied by architects to denote the art of distributing the different forces and strains of the parts and materials of a building in such a scientific manner as to avoid failure and insure durability.

**CONTABULATE.** To floor with boards.

**CONTABULATION.** The act of flooring.

**CONTACT.** In geometry, the touching of any figure by a line or plane which may be produced either way without cutting it; the point of contact is the point where a curvilinear touches a straight line; the angle of contact is the angle formed by the meeting of a curvilinear and a straight line.

**CONTENEMENT.** Land contiguous to a tenement or holding necessary to its due enjoyment.

**CONTENT.** The area or superficial quantity contained in any figure.

**CONTEXTURE.** The inter-disposition with respect to each other of the different parts of a body.

**CONTIGNATION.** A frame of beams; a storey.

**CONTIGNATO.** Roman term for naked flooring.

**CONTINUATION.** Anything continued; a building extended or carried on to a further point.

**CONTINUED.** Anything uninterrupted; thus a continued handrail is a rail either starting from a newel or scroll and being continued

throughout the stairs without interruption (by newels) and supported only by the balusters; an attic is said to be continued when not broken by pilasters.

**CONTINUED SOCLE.** One continued round a building.

**CONTINUOUS ESPALIER.** An espalier in the form of an arch.

**CONTINUOUS IMPOSTS.** A term sometimes applied to the mouldings of an arch which are continued without interruption down the up-rights to the ground or base, the impost point having no mark or distinction of any kind.

**CONTRINE.** In the stowage of casks, the empty space left between them.

**CONTOUR.** The external lines which bound and terminate a figure.

**CONTOURING.** In surveying, the outline of a horizontal section of the ground.

**CONTRACT.** An agreement attached to a specification for the performance of certain works.

**CONTRACTION.** The effect of cold upon a warm body, causing a diminution in its size by the particles approaching each other.

**CONTRACTOR.** One who contracts specially to perform any work at a certain price or rate; he is generally guided by the specification, drawings and quantities.

**CONTRACTURA or DIMINUTION OF A SHAFT or COLUMN.** Is the continued contraction from the base to the top of a shaft. In nearly all modern examples of columns the shaft is regularly diminished from bottom to top, when the shaft becomes a frustum of a cone. In the Doric order the diminution is one-fourth of the lower diameter, and in the Ionic and Corinthian one-sixth.

**CONTRAMURE.** An out wall built about the wall of a city or fortification.

**CONTRARY FLEXURE.** The point of contrary flexure is that point of a curve where the curvature alters from concave to convex, or the reverse as respects the first direction of the curve. Contrary flexure occurs in a loaded beam, fixed at both ends.

**CONTRIPETAL.** Tending towards the centre; expanding first at the base and afterwards at the summit.

**CONTRIPETAL FORCE.** The force which draws a body towards a centre.

**CONVECTION.** A purely theoretical term, signifying the conveying of electrical charges or currents by mechanical or electrical means.

**CONVECTION.** The gradual passage of heat from one molecule of matter to that adjacent to it; as, for instance, if a poker be put in a fire the handle gradually becomes hot, being heated by "convection" or the travelling of heat along the metal from molecule to molecule.

**CONVENT.** A building for the reception of religious recluses; a monastery; a nunnery.

**CONVENTUAL CHURCH.** One attached or belonging to a convent.

**CONVERGENT LINES or CONVERGING or CENTROLINIALS.** Are any number of straight lines which, when produced, all meet in one point or common centre.

**CONVERGING RAYS.** Those rays of light which proceed from different points of an object and tend toward a single point.

**CONVERGING SERIES.** In mathematics, that in which the magnitude of the several terms gradually diminishes.

**CONVERSION.** Of timber, is the reducing of logs, etc., to planks, deals, battens, etc.; also called "converting".

**CONVERTER.** A large pear-shaped iron vessel, hung on hollow trunnions, and lined with firebrick, fireclay or ganister.

**CONVERTER.** Alternating current transformers are often called "converters".

**CONVEX.** Swelling on the exterior surface into a rounded form, as opposed to concave.

**CONVEXO-CONCAVE.** Convex on one side and concave on the other.

**CONVEXO-CONVEX.** Convex on both sides.

**CONVEXO-PLANE.** Convex on one side and plane on the other.

**CONVEYANCE.** The transferring of property from one person to another.

**COOL.** Lime allowed to remain for several weeks, to become thoroughly slaked.

**COOPERTORIUM.** The roof of a building.

**CO-ORDINATES.** In the theory of curves, any absciss and its corresponding ordinate.

**COPAL.** Is the concrete juice of a tree growing in America and the East and West Indies, etc.; it is in three qualities, according to colour (which becomes lighter by exposure), the palest being selected for the highest class varnish.

**COPAL VARNISH (Spirit).** Consists of melting by a slow heat in an iron pot powdered copal gum; balsam of copivi which has been previously heated is then added; when melted it is removed from the fire and spirits of turpentine, previously warmed, is added.

**COPE.** In the north of England, same as Coping.

**COPE.** Anything extended over the head, as the arch or concave of the sky, the roof or covering of a house, the arch over a door, etc.

**COPE.** To "cope" is to jut out as a wall, or to cover over an arch.

**COPESTONE.** A head or top stone.

**COPING.** A course of stone or brick forming a finish to the top of a wall; it is either flat or sloping on the upper surface to throw off the water. The stone along the ridge of a roof and also down the two sides of a gable end are called "coping stones".

**COPLAND.** A piece of ground terminating in a cop or acute angle.

**COPPE-HOUSE.** Anciently, a tool house.

**COPPER.** One of the six primitive metals, is of a pale yellow or red colour; brass is made from copper mixed with *tapis caluminaris*.

**COPPER.** A boiler for a wash-house, open at the top, whether made of iron or copper.

**COPPERAS.** The commercial name for the sulphate of iron, or green vitriol.

**COPPER BIT.** A plumber's tool, in the form of a bolt of iron tipped with copper, either straight with a pointed end or hatchet-shaped at the end; used for supplying heat in finishing lead joints with fine or solid solder.

**COPPER BIT JOINT.** A joint made with fine solder with a copper bit.

**COPPER GREENS.** Verdigris, verditer, malachite, mineral green, green bice, lake green, African green, etc., etc.

**COPPER NAILS.** Are made of the same shapes as iron nails; generally used in damp situations where iron nails would be subject to corrosion.

**COPPER NICKEL.** A mineral of a copper-coloured ore of nickel and arsenic; found in Westphalia.

**COPPERPLATE.** A plate of polished copper on which something is engraved.

**COPPER-PYRITES.** A chemical compound of copper and sulphur.

**COPPER WORK.** Work executed in copper.

**COPPICE.** A wood of small growth.

**COPPLE STONE.** A cobble stone.

**COPSE WOOD.** A coppice.

**CORAL WOOD.** Is of a fine red colour, hard and polishable; found in Africa and America.

**CORAL-RAG.** A coralliferous limestone deposit; a member of the middle division of oolite.

**CORB.** A basket used in collieries.

**CORBAN.** Among the ancients, a vessel to receive gifts of charity; a ceremony performed by Mohammedans at the foot of Mount Arafat in Arabia.

**CORBEIL.** In architecture, a sculptured basket sometimes set upon the heads of caryatides; the vase or tambour of the Corinthian column; so called from its resemblance to a basket; a niche or hollow left in walls, for images, figures or statues; also spelt "corbel".

**CORBEL.** A stone, iron or piece of brickwork projecting from a wall and forming a support for anything. Corbels are used in a great variety of situations and are carved in

various ways according to the taste of the age in which they are executed; the commonest form is that of an ogee.

**CORBEL COURSE.** A continuous corbel, very long in proportion to its depth.

**CORBELLING.** A method of bringing out by degrees a part of a brick wall which projects beyond the face of the work.

**CORBEL TABLE.** Is a row of corbels supporting a parapet or cornice.

**CORBIE STEP.** Steps up the sides of a gable; the top stone is termed the crow stone; found in old houses in Scotland, Flanders, Holland, etc.; also called "crow step"; sometimes spelt "corbel".

**CORBONA.** In mining, a dropper from a lode in irregular masses.

**CORBS.** Ornaments in architecture.

**CORD OF TIMBER.** Contains 128 cubic feet.

**CORDON.** The edge of a stone on the outside of a building; in fortifications it is a row of stones jutting before a rampart.

**CORE.** In the Cornish tin mines, a division of time and labour.

**CORE.** The core of a column is a strong post of some material inserted in its central cavity.

**CORE.** Bricks or tiles brought out for the formation of cement cornices or other projections.

**CORE.** A flat bar of iron about a quarter of an inch thick screwed down upon the heads of the balusters and up to the underside of a hand-rail.

**CORE.** Is the space between the lintel and an arch, which is filled in with bricks and bats cut to the required curve and laid in mortar.

**CORE.** In foundry work, the mass of sand that occupies the interior of a hollow casting; the loose internal parts of moulds for forming holes and recesses.

**CORE.** To "core" a flue is to clean it out after it is built; to leave them clean after completion.

**CORE NAIL, CHAPLET OF GRAIN.** Nails or rods with large flat heads; used to keep the core in position

when casting hollow articles on the flat. They are necessarily left imbedded in the finished article.

**CORE PRINT.** A projection on a pattern which leaves a print on the face of the mould, in which the end of the core is afterwards inserted.

**CORINTHIAN BRASS.** A term applied to gold, silver and copper casually mixed together at the burning of the city of Corinth.

**CORINTHIAN ORDER.** One of the five orders of architecture; it is generally considered to be the most delicate and ornate of all the five orders, the capital being enriched with a graceful assemblage of foliated forms added to the volutes of the Ionic capital.

**CORKED or CALKED.** Is a method of splitting the ends of a chimney bar longitudinally and turned in opposite directions up and down.

**CORKED.** Same as Caulked.

**CORKSCREW STAIRS.** A spiral staircase.

**CORK TREE.** A species of oak cultivated in Spain, Portugal and France; the rough bark is stripped off every ten years and manufactured into corks.

**CORNBRASH.** A coarse shelly limestone.

**CORNERS.** (Scotch term.) Same as Quoins. "Inside" and "outside" corners are usually billed separately; by "inside" corners being meant salient angles not visible from the outside, not re-entrant angles.

**CORNER STONE.** In architecture, the stone which unites two walls of a building at the corner; the two stones which stand one in each joint of a chimney.

**CORNEUS.** A kind of tin ore found in black columns, with irregular sides and terminating in prisms.

**CORNICE.** In masonry, a moulded overhanging course of stones near the top of an external wall.

**CORNICE.** A series of horizontal mouldings worked in plaster round the edge of a ceiling, or a series of mouldings round the top of a book-case, dresser, etc.

**CORNICE.** In architecture, is the secondary member of the order itself, and the upper member which crowns and finishes an entablature. Cornices are generally divided into three parts, the bed moulding, the corona and the cymatium or upper moulding.

**CORNICE GUTTER.** One formed with lead on the top of a stone cornice hollowed out to receive the lead.

**CORNING HOUSE.** A house or place where powder is granulated.

**CORN LOFT.** A corn granary.

**CORN STONE.** A mottled kind of limestone found in the old red sandstone formation.

**CORNUBIANITE.** A slaty rock abundant in Cornwall; found in contact with granite.

**CORNISH AND DEVONSHIRE GRANITE.** Sometimes called "moor-stones". Contains a large proportion of felspar; it weathers badly in some cases.

**CORNUCOPIA.** The horn of plenty; an emblem of abundance of fruits; among architects and sculptors it is represented under the figure of a large horn, out of which issue fruit, flowers, etc.

**CORNULITES.** A genus of tube worms found in the silurian limestones and sandstones.

**COROMANDEL WOOD.** Is of a red, hazel-brown colour, obtained from Ceylon and the coast of India; it is shipped in logs and planks from Bombay and Madras.

**CORONA.** A large flat member of a cornice, more usually called the drip or larmier, whose situation is between the cymatium above, and the bed moulding below; usually of considerable projection to carry off the rain that falls upon it.

**CORONA.** A crown, sometimes of triple circlets suspended from a roof to hold tapers which are lighted on solemn occasions in churches.

**CORPORAX CLOTH.** A linen cloth or napkin spread upon the altar, on which the host and chalice are placed at the mass in the Catholic service.

**CORPS.** The projecting part of a wall intended to form the ground for some decoration.

**CORPSE GATE.** Same as Lych Gate.

**CORRIDOR.** A gallery or open communication round a building, or to the different apartments.

**CORROSIVE SUBLIMATE.** The bi-chloride of mercury.

**CORRUGATED IRON.** Is made by passing sheet iron between grooved rollers which force and bend them into a series of parallel waves or corrugations, which increases its stiffness and strength; this term is generally applied to sheet iron or zinc.

**CORRUGATED TILES.** Are similar to pantiles, but with three or four corrugations.

**CORSA.** In ancient architecture, any platband or square fascia whose height is greater than its projection.

**CORSHAM DOWN STONE.** Is found in several layers or beds. The three principal varieties are the "soft scallet," which is of a fine grain and suitable for mouldings, etc., found about ninety feet below the surface, in beds about three feet thick; the next below is the "corngrit," a good coloured, sound, durable and harder stone, full of pieces of flint; weathers badly, being unable to resist frost; below the "corngrit" is the "bottom bed," which is frequently stained with blue patches; it is a soft stone in beds about four and a half feet thick.

**CORSHAM RIDGE.** Is a good hard stone used for face work.

**CORTEX.** The bark of a tree; a covering.

**CORTILE.** A small open internal court or area, quadrangular or curved, enclosed by the divisions or appurtenances of a building.

**CORTILE (Italian).** The internal arched quadrangle of a palace, mansion, or public building.

**CORTIS.** In the Middle Ages, a court surrounded by edifices.

**CORUNDUM.** A mineral of extreme hardness consisting of nearly pure alumina.

**CORYCEUM.** A room similar to a tennis-court.

**COSECANT.** In geometry, the secant of the complement of an arc or angle.

**COSEY CORNER.** An ornamental seat made to fit in the corner of a room.

**COSINE.** In geometry, the sine of the complement of an arc or angle.

**COSMOLABE.** An ancient instrument for measuring distances, celestial or terrestrial.

**COSMOMETRY.** The art of measuring the world.

**Coss.** A Hindu measure of from one and a half to two miles.

**COSTEANING.** Probing for tin, by sinking pits in the vicinity of lodes, and drawing transversely to their supposed direction.

**COSTEAN PITS.** In Cornish mining, are shallow pits sunk to trace or find tin.

**COT.** A small house ; a hut.

**COTANGENT.** In geometry, is the tangent of any complemental arc or what the arc wants of a quadrant or 90°.

**COT BAR.** A circular bar in a semi-circular sash.

**COTLAND.** Land appendant to a cottage.

**COTTAGE.** A small dwelling house.

**COTTAGE ALLOTMENTS.** Portions of ground allotted to the dwellings of country labourers.

**COTTAGE CLOSET.** A water-closet which consists of a shallow hopper basin, set on a length of straight pipe, which discharges into a syphon trap.

**COTTER.** A wedge-shaped piece of wood or iron for fastening the parts of a structure ; generally used with gibs ; known as "gib and cotter".

**COTTERED JOINT.** A joint held by means of a "gib and cotter".

**COULISSE.** A slip in which the side scenes of a theatre run ; any piece of timber which has grooves in it ; also applied to pieces of wood which hold the floodgates in a sluice.

**COULOMB.** The unit of "quantity" ; 1 coulomb = 1 ampere  $\times$  1 second.

**COUNCIL BOARD.** The table round which a council holds consultation.

**COUNCIL CHAMBER.** A room or apartment where the members of a council meet to transact business.

**COUNTER.** A word used as a prefix to several terms, and signifies "against".

**COUNTER.** A table or board, more or less ornamented, on which money is counted or goods laid.

**COUNTER CHECK.** A term applied in the North to the meeting rail of a sash.

**COUNTER DRAIN.** A drain parallel to a canal, embanked water-course or sewer, for collecting the surface or soakage water.

**COUNTER FLOOR.** A floor of ordinary pine battens laid diagonally upon the joists ; commonly inserted below a polished floor.

**COUNTERFORT.** A pier, buttress or oblique wall built at right angles to a wall or terrace to support and strengthen it.

**COUNTERGAUGE.** In carpentry, a method of measuring joints, by transferring the breadth of a mortise to the place where the tenon is to be.

**COUNTERGUARD.** In fortifications, a small rampart or work raised before the point of a bastion.

**COUNTER LATH.** One placed between every couple of gauged ones.

**COUNTER LATH.** In tiling, a lath placed by the eye.

**COUNTER LATHING.** A method of nailing laths to a beam about a foot apart, to which the ordinary lathing is nailed, the object being to afford a key for the plaster.

**COUNTERMURE.** A wall raised behind another to supply its place when a breach is made.

**COUNTERPARTS OF A BUILDING.** Are the similar or equal parts of the design on each side of the middle of the edifice.

**COUNTERSCARP.** In fortifications, the exterior slope of a ditch opposite the scarp.

**COUNTERSCARP REVETMENT.** A retaining wall with the earth above the top.

**COUNTERSINK.** A bit for boring a conical depression in wood or metal, generally for the head of a screw.

**COUNTER SKYLIGHT or CEILING LIGHT.** Is a sash under a lantern light so as to keep the plane of the ceiling almost unbroken.

**COUNTER-SLOPING REVETMENT.** A retaining wall with the back battered.

**COUNTERSUNK.** The head of a screw or rivet let in flush with the surface is "countersunk," the hole cut so as to admit of this is also said to be countersunk :

**COUNTERSUNK CLOUT NAILS.** Are those having their heads shaped so as to fit a countersinking, and are usually made with flat points; generally used for securing iron plates, etc., to woodwork.

**COUNTERSUNK RIVETS.** Are those having the head flush with the surface of the work.

**COUNTESS SLATES.** Are those twenty inches by ten; they are sold by the thousand of twelve hundred.

**COUNTING HOUSE or ROOM.** The house or room appropriated to the keeping of business books, accounts, letters, etc.

**COUNTRY SEAT.** A mansion in the country.

**COUNT SLATES.** Are those sold by the thousand of twelve hundred, or if in smaller quantities by the hundred.

**COUP.** A term applied in the North to a tip for rubbish.

**COUPLE.** In the north of England a roof truss; a pair of rafters.

**COUPLE CLOSE.** A pair of spars of a roof.

**COUPLE CLOSE ROOF.** A roof similar to a couple roof, but the feet of the rafters are held together by ties.

**COUPLED COLUMNS.** Those arranged in pairs half a diameter apart.

**COUPLED PILASTERS or COLUMNS.** When two are placed together upon the same pedestal.

**COUPLE ROOF.** Is when the rafters run from wall plate to ridge, without any cross pieces between; they are only used in small spans of about twelve feet.

**COUPLES.** Are rafters framed together in pairs with a tie fixed

above their feet; the main couples answer to trusses.

**COUPLING BOX.** A short hollow prism of metal with reverse screws tapped inside its ends to connect and tighten up two ends of a severed rod.

**COUPURE.** In fortifications, an entrenchment behind a breach in a wall, raised to prolong the defence.

**COURSE.** In a built beam, is the term applied to each piece or beam so united together.

**COURSE.** In brickwork, a horizontal layer of bricks; in masonry, a horizontal layer of stones of the same height.

**COURSE.** In slating, a row of slates in a roof.

**COURSE.** In Cornish mining, is a tin or copper course; a term used for working of the lode.

**COURSED or REGULAR COURSED RUBBLE.** Consists of a sufficient number of stones being obtained, of a uniform depth, to allow of their being laid in regular courses of one stone only in depth; the courses need not all be of the same height; also called "rangework".

**COURSED HEADER WORK.** Is similar to coursed rubble, only the bondstones or headers are the full height of the course, the intervals between them being filled with smaller stones.

**COURSED RUBBLE WORK.** Is when the stones are roughly dressed on the exterior and brought into a square or nearly square shape and sorted into sizes according to their height and bulk, then they are built into courses which preserve a uniform width throughout.

**COURSE OF A PLINTH.** Is its continuity in the face of the wall.

**COURSE OF THE FACE OF AN ARCH.** Is the face of the arch stones whose joints radiate to the centre.

**COURSING JOINT.** Is the joint between two adjoining courses.

**COURT.** A space enclosed by houses; an uncovered area before or behind a house or in the centre of it.

**COURT-HOUSE.** A house appropriated to courts and public meetings.

**COURTS OF JUSTICE.** The Roman courts of justice consisted of twelve halls or courts which were adorned with statues, columns and porticoes, with double rows of columns.

**COURT-YARD.** An enclosure round a house.

**COUSSINET.** A stone placed upon the impost of a pier for receiving the first stone of an arch; its bed is level below and the upper surface inclined to receive the next voussoir of the arch.

**COUSSINET.** That part of the Ionic capital between the abacus and quarter, round which serves to form the volute.

**COVE.** A large hollow moulding or inverted scotia; any kind of concave moulding; the concavity of an arch or of a ceiling; the quadrantal profile between the ceiling of a room and its cornice.

**COVE-BRACKETING.** The wooden skeleton for the lathing of any cove; chiefly applied to the quadrantal cove.

**COVED ARCHES.** The arches formed by covering a rectangular room with vaulting springing from the sides and ends.

**COVED CEILING.** A ceiling in which there is a deep hollow curve in the plastering at the junction of the ceiling with the side walls.

**COVED VAULT.** Is one that springs from all sides of its plan.

**COVER.** That part of a slate which is hidden or covered; the exposed part being called the margin.

**COVER.** A turret or cupola on the roof of a hall or kitchen, pierced at the sides to allow smoke or steam to escape.

**COVER FLAP.** A flap for covering the recess into which window shutters fall.

**COVER FLASHING.** See Apron.

**COVER PLATE.** The plate used in forming a "fished joint"; an iron plate used to connect the ends of two iron girders.

**COVER STONES.** Flat stones laid on the upper flange of an iron girder carrying a brick wall above; they serve as a foundation for the brick-work.

**CO-VERSED SINE.** In geometry, the sine of the complement of an arc or angle.

**COVER WAY.** In fortifications, a space, about thirty feet wide, of ground level with the field, round the outside of the ditch between the counterscarp and the glacis.

**COVER WAY.** In roofing, the recess or internal angle left in a piece of masonry or brickwork to receive the roofing.

**COVIE or COVEY.** A pantry.

**COVING.** The projecting of the upper storeys of old houses over the lower ones.

**COVING.** The exterior projection of the upper parts of a building beyond the limits of the ground plan.

**COVING OF A FIREPLACE.** The part of the back of a grate above the hobs.

**COWL.** A terminal for a flue or ventilating pipe, made to turn round by the wind, and used to facilitate the escape of smoke.

**CRAB.** A kind of crane used for raising large stones; it consists of a wheel and axle mounted on a pair of sloping legs three or four feet apart, the legs being inserted into a frame at the base.

**CRACKLE GLASS.** Is the name given to glass having a rough irregular surface.

**CRADLE.** A kind of template used for glueing up treads and risers in staircasing.

**CRADLE.** A term sometimes applied to a centering of ribs and lattices for turning culverts.

**CRADLE VAULT.** A term sometimes applied to a cylindric vault.


**CRADLE WALK.** A walk under an avenue of trees.

**CRADLING.** The backings for a soffit lining; the timber ribs and pieces for sustaining the lathing and plastering of vaulted ceilings; the wooden bracketing for carrying the cornice, etc., of a shop front.

**CRAFTSMAN.** A skilled artificer or mechanic.

**CRAG.** Gravel of the old pliocene formation which is highly fossiliferous.

**CRAIGLEITH STONE.** Is the most durable sandstone in the United Kingdom; it is a brilliant greyish-white in colour and consists of quartz grains united by a silicious cement with small plates of mica; it contains 98 per cent. of silica, and about 1 per cent. of carbonate of lime.

**CRAMP.** A piece of iron, copper or other metal shaped thus, ; used for joining two blocks of stone; a tool used for tightening up framing, etc., in joinery.

**CRAMPING.** The work of cramping the stone cappings of tall chimneys or taking them away altogether; it is an important branch of repairing shafts. When the structure is first built the stones of the coping are probably secured with iron cramps, and being of iron the cramps corrode, and this corrosion causes the stones to burst and become a source of danger, as the detached pieces are liable to fall to the ground at any time.

**CRAMP IRON.** A cramp for stone.

**CRAMPET.** In the north of England, a wall hook.

**CRAMPOONS.** Hooked pieces of iron resembling double calipers; used for raising timber or stones.

**CRANAGE.** The right of using a crane at a wharf; the price paid for the use.

**CRANDALLED.** Is a quick method of pointing stone; it is similar in effect to "fine pointing".

**CRANE.** A machine used for hoisting and lifting stones, etc., by means of a rope or chain passing over a pulley at the end of a projecting arm called the "jib," which is movable about a vertical axis.

**CRANE.** In the North, a tap or cock for water.

**CRANE HOUSE.** A building erected for the shelter of a crane.

**CRANK.** An iron axis or axle, with a part bent like an elbow, for producing a horizontal or perpendicular motion by means of a rotary, or the contrary.

**CRAPANDINE DOOR.** A door that turns on pivots at top and bottom.

**CRAYON.** A piece of chalk, etc., of

different colours, for drawing on paper; a drawing made with crayons.

**CRAZING MILL.** A mill for grinding tin.

**CREASES.** A term applied to ridge tiles in the west of England and South Wales.

**CREASE'S ANTICORROSION.** Is a black bitumen paint; useful for coating submerged iron.

**CREASE'S ANTIWATER ENAMEL.** A paint for iron, is a kind of silico-calcic cement which adheres to the iron fairly well, especially if it is nearly always submerged in water.

**CREASING or TILE CREASING.** Two rows of plain tiles placed horizontally under the coping of a wall, and projecting about an inch and a half on each side to throw off the water.

**CREAZES.** In mining, the work or tin in the middle part of the buddle, or dressing.

**CREDENCE.** The small table at the side of the altar, or communion table; used for the purpose of holding the bread and wine before consecration.

**CREEPING RAFTERS.** Short rafters between the valley or hip rafters and the ridge or wall plates respectively, generally called "Jack rafters".

**CRENELLATED MOULDING.** A moulding used in Norman architecture carved into a resemblance of battlements, notchings or indentations; also spelt "crenulated".

**CRENELLE.** A loophole or embrasure; in Gothic architecture the opening in an embattled parapet.

**CREOSOTE.** Is an oily dark liquid obtained by distilling tar; chiefly used for preserving timber.

**CREOSOTING.** Is the name given to a method of preserving timber; it is effected by extracting the moisture and air from the fibres of the timber and then forcing in "creosote" (oil of tar) at a high pressure; the timber is afterwards dried and placed in a closed wrought iron cylinder and the air extracted by means of a pump; creosote is then forced into the cylinder at a temperature of about 120° and with a pressure of about 170 lb. to the square inch.

185 SECOND AVENUE.

CIRCULATING DEPARTMENT.

**CREPIDO.** Any raised basement upon which other things are built or supported, as of a temple, altar, obelisk, etc.

**CRESCENT.** A building or series of buildings whose plan is the arc of a circle.

**CRESSET.** A candlestick or lamp to contain a light.

**CREST.** The finials on gable ends, also pinnacles are sometimes called crests; the ornamental finishing which surmounts a screen, canopy, etc.

**CRESTING.** A vertical projection from ridge tiles.

**CREST TILES.** Are those used to cover the ridge of a roof upon which they sit like a saddle.

**CREUX.** A kind of sculpture, when the lines and figures are cut and formed within the face of the plate.

**CRIB.** The rack of a stable; a manger; any small habitation; the stall or cabin of an ox.

**CRIB.** Is a timber structure placed below the caisson which transmits the pressure to the bed of the foundation.

**CRIBS.** Are circular timbering; used in excavating where the ground consists of wet clay.

**CRICHTONITE.** A mineral of a velvet black colour, and crystallised in a rhomboidal form; so called from Dr. Crichton.

**CRIPPLINGS.** Short spars at the sides of houses; timbers set up as supports against the side of a building.

**CRISTA.** A crest; the apex or highest part of a shrine.

**CROCKET.** An ornamentation of curved and bent foliage running up on the edge of a gable, spire, pinnacle, etc.

**CROCUS.** Any metal calcined to a red or deep yellow colour.

**CROFT.** A little field adjoining or near a dwelling house, and used for pasture or tillage.

**CROMLECH.** In British antiquity, a structure consisting of a huge flat stone resting as a table on others, set on end for that purpose, and supposed to be a sepulchre.

**CRONDE, CROWDE or CROFT.** The crypt or undercroft of a church.

**CROP.** Ore or tin of the first quality, after it is dressed or cleaned for smelting.

**CROP OUT.** To crop out, said of an underlying stratum of rock; to come out at the surface by the edge.

**CROSLET.** A small cross; a cross crossed at a small distance from the end.

**CROSETTE.** A truss or console in the flank or return of an architrave of a window, door or other aperture; small projecting pieces in arch stones which hang upon the adjacent stones.

**CROSS.** A figure consisting of four branches at right angles to each other, or it may be a geometrical one consisting of five rectangles, each side of one rectangle being common with one side of each of the other four. The most common forms of crosses are the Greek cross, the Latin cross, the St. Andrew's cross and the Maltese cross.

**CROSS, CROSS CRUSSE, CROSSBAR, CROSS GOFFAN or CROSS LOD.** Is either a vein of a metallic nature, or a soft earth, clay or flookan, like a vein, which unheads and intersects the true lode.

**CROSS AISLE.** The lateral division in the form of a cross.

**CROSS BANDED.** A term applied in handrailing when a veneer is laid upon its upper side with the grain of the wood crossing that of the rail.

**CROSS BEAM.** A large beam running from wall to wall, or a girder that holds the sides of a house together.

**CROSS-CUT SAW.** A large two-handled saw used for cutting logs across the grain; worked by two men, one at each end.

**CROSSETTE.** The small projecting piece in arch stones which hangs upon the adjacent stones.

**CROSSETTE.** A projection sometimes left upon an arch stone to give it a hold on the one below it.

**CROSS GARNET, T or STRAP HINGE.** Is a hinge with one leaf tailed; used for common work, such as ledged

doors, etc., or where the stuff is too thin to admit of butts being screwed on the edge.

**CROSS GRAINED.** Wood in which the fibres are presented endways or obliquely on the surface.

**CROSS GROOVING.** Grooving across the grain of the wood.

**CROSS HEAD.** A beam or rod stretching across the top of anything.

**CROSS QUARTERS.** An ornament of cruciform tracery.

**CROSS SILL.** A block of stone or wood laid in broken stone filling to support a sleeper or sleepers.

**CROSS-SOMER.** A beam of timber.

**CROSS SPRINGER.** The springing stone at the groin of an arch; in groined vaulting the rib which extends from one pier to another.

**CROSS STAFF.** Is an instrument used in the field by surveyors to erect perpendiculars; or one to take offsets.

**CROSS STONE.** A mineral called harmotome.

**CROSS TAILED HINGE.** In the North, a cross garnet hinge.

**CROSS TIE.** A connecting band in building; a railway sleeper.

**CROSS TONGUE.** In joinery, is one in which the grain runs at an angle to its length instead of in the direction of its length; work put together with cross tongues is said to be cross-tongued; should be specified for all good work.

**CROSS VAULTING.** That formed by the intersection of two or more simple vaults; when each of the simple vaults rises from the same level to equal heights, the cross vaulting is denominated a groin, but when one of the vaults is below the other the intersection is called an arch of that particular species which expresses both the simple arches.

**CROWBAR.** A bar of iron with a claw at one end, used as a lever.

**CROWDED.** A term applied when dried bricks are ("crowded") filled into the kiln and the ends built up and plastered over with clay.

**CROW FOOTS.** Are veins in stone containing dark coloured uncemented material.

**CROWN.** In geometry, a plain ring included between two concentric perimetres, generated by the motion of part of a right line round the centre, to which the moving part is not contiguous.

**CROWN.** The uppermost member of any part; the top of an arch; the uppermost member of the cornice, including the corona.

**CROWN GLASS.** Glass blown into circular discs about fifty-two inches in diameter; it is the finest kind of window glass; the average thickness is about one-fifteenth of an inch; the qualities are known as seconds, thirds and fourths; also called "Newcastle glass".

**CROWNING.** The part that terminates upwards any piece of architecture, such as a cornice, pediment, etc.

**CROWN LAND.** Land or other real property belonging to the sovereign.

**CROWN PIECE.** A short timber placed on the walling to receive the end of the strut.

**CROWN POST** or **JOGGLE POST.** Same as King Post.

**CROWN WHEEL.** A wheel with its rim bent round to form a raised ring and this cut into cogs.

**CROWN WORK.** In fortifications, an outwork consisting of a bastion connected by a curtain with two half bastions at the ends.

**CROW STEPS.** A term applied in the North when the gable of a building is formed into a series of steps; the top step is known as the crow stone.

**CROYLSTONE.** Crystallised cawk.

**CROZE.** A tool used by coopers.

**CROZIER.** The pastoral staff of a bishop or mitred abbot, having the head curled round similar to a shepherd's crook.

**CRUCIBLE.** A hollow place at the bottom of a furnace to receive the melted metal.

**CRUCIBLE CAST STEEL.** Is produced by melting fragments of blister steel in covered fire clay crucibles, and running the metal into iron moulds; or it is produced direct from bars of the best wrought

iron broken into lengths and placed in the crucible together with a small quantity of charcoal, varying according to the temper of steel to be produced.

**CRUCIFIX.** A representation or effigy of Christ on the cross.

**CRUCITE.** A red oxide of iron; so called from its crystallising in the form of a cross.

**CRUSHING.** Destruction by compression.

**CRUSTÆ.** Figures or images in low relief embossed upon plate.

**CRUT.** The rough shaggy part of oak bark.

**CRUTCH KEY.** See Bib Cock.

**CRYOLITE.** A mineral from Greenland; a fluoride of sodium and aluminium.

**CRYPT.** A vault beneath a building either entirely or partly under ground, frequently under churches and cathedrals.

**CRYPTO-PORTICUS.** A concealed portico or enclosed gallery in ancient architecture; subterranean or dark passages in Roman villas.

**CRYSTAL VARNISH.** Consists of melted Canada balsam well mixed with an equal quantity of oil of turpentine.

**CRYSTALLITE.** A whinstone that has cooled slowly after fusion.

**CTESIBICA MACHINA.** A double actioned forcing pump invented by Ctesibius of Alexandria.

**CUARE.** In Cornwall, a quarry of stones.

**CUBA MAHOGANY.** See Spanish Mahogany.

**CUBATURE.** The finding exactly the solid or cubic contents of a body.

**CUBE.** A regular solid body, with six equal square sides, and containing equal angles.

**CUBE.** Commonly used instead of "cubic".

**CUBE ESTIMATE.** Is an estimate of the cost of a building based on the number of cubic feet it contains.

**CUBE ORE.** An ore of a green colour; arseniate of iron.

**CUBE ROOT.** Is the number or quantity which, multiplied into itself three times, will equal the given number.

**CUBE STONES.** Stones of such a size as are measured and paid for by the foot cube.

**CUBIC FATHOM OF TIMBER.** Contains two hundred and eighteen cubic feet.

**CUBICLE.** A space in a dormitory containing a bed, separated from the rest of the room by a low partition.

**CUBICLE.** Among the Romans, a bed-chamber, tent or balcony.

**CUBICULUM.** In ancient architecture, a chamber; also applied to a royal pavilion or tent built in the circus or amphitheatre for the reception of emperors.

**CUBICULUM.** Among the ancients, a room furnished with a sofa or bed.

**CUBILE.** The foundation, or lowest course of stones in a building.

**CUBIT.** A linear measure of the ancients, being the length of a man's arm from the elbow to the extremity of the middle finger, from eighteen to twenty-two inches; the geometrical cubit of Vitruvius was equal to six ordinary cubits.

**CUBO-DODECAHEDRAL.** Presenting the two forms, a cube and a dodecahedron.

**CUBO-OCTAHEDRAL.** Presenting a combination of the forms, a cube and an octahedron.

**CUL-DE-FOUR.** A low vault spherically formed on a circular or oval plan; an oven-shaped vault.

**CUL-DE-LAMPE.** A term used for several decorations both in masonry and iron work.

**CUL-DE-SAC.** A street open only at one end.

**CULLET.** Broken glass intended for remelting.

**CULLIS.** A gutter in a roof; any groove or channel.

**CULLS.** Same as Brack.

**CULM.** Stone coal resembling the Kilkenny coal of Ireland; comminuted glance-coal.

**CULMEN.** In ancient Roman architecture, the ridge piece of a roof; the roof of a house or church.

**CULVER HOUSE.** A pigeon house or dove-cote.

**CULVERT.** An arched drain for the passage of water.

**CULVERT.** An arched passage or bridge beneath a road, canal or railway.

**CULVER-TAIL.** Same as Dove-tail.

**CUNEIFORM.** Of letters, in Assyrian inscriptions, wedge shaped.

**CUNEIFORM LETTERS.** Those in which the old Persian and Babylonian inscriptions are written; so termed from their wedge-like appearance.

**CUNETTE.** In fortifications, a trench at the bottom of a dry ditch.

**CUNEUS.** The wedge.

**CUNEUS.** That part of a Roman theatre where the spectators sat.

**CUP.** A small brass socket into which the head of a wood screw fits; used in superior work when the screw is frequently removed; the cup prevents injury to the wood.

**CUPBOARD.** A recess in a wall fitted up with shelves, etc., as a receptacle for articles.

**CUPBOARD TURN.** Same as Turn-buckle.

**CUP-ENDED RIVETS.** Same as Snap Rivets.

**CUP LEATHER.** The leather ring which is fixed on the bucket of a common pump to make it work watertight.

**CUPEL.** A small vessel for refining precious metals.

**CUPEL DUST.** Powder used in purifying metals.

**CUPOLA.** A dome; an arched roof; a spherical cup-shaped vault on the top of a building.

**CUPOLA.** A small room, either circular or polygonal, standing on the top of a dome; a lantern light on the top of a dome.

**CUPOLA.** In ironworks, is similar to a small blast furnace and acts in the same way.

**CUPOLAS or OVENS.** Are small circular-domed kilns.

**CUPPY.** Timber having cup shakes.

**CUPRITE.** The red oxide of copper.

**CUP SHAKES.** In timber, is the separation of a portion of the whole or part of two annular rings; called by some "heart shakes".

**CURB.** A support on the edge, such as a curb stone, or the wood framing that forms the sides of a skylight; a wooden frame in which the first few feet of steining is built in well sinking.

**CURB.** For brick steps, is a timber nosing, generally of oak; used to prevent the steps from wearing, etc.

**CURB PLATE.** A circular continued plate either scarfed together or made in one or more pieces; the plate of a skylight or a circular frame for a well; the wall plate of a circularly or elliptically ribbed dome; also the horizontal rib at the top on which the vertical ribs terminate.

**CURB RAFTERS.** The timbers supported in a curb roof by the upper ends of the lower rafters, for receiving the feet of the upper rafters, are termed "curb rafters".

**CURB ROOF.** A roof rounded on the top, having two slopes on each side. Same as Mansard Roof.

**CURB STONE.** Same as Kerb Stone.

**CURIA.** A Roman council house, described by Vitruvius as being adjacent to the agora or forum.

**CURING HOUSE.** A building in which sugar is drained and dried.

**CURLING or FIGURED STUFF.** In timber, is that caused by the winding or coiling of the fibres round the boughs of the tree when they begin to shoot out of the trunk.

**CURLS.** In timber, is the result of the confused filling in of the space between the forks or the springings of the branches; sometimes called "feathers".

**CURRENCY.** The current medium of trade authorised by Government.

**CURRENT.** The necessary fall or slope of a piece of ground or pavement for carrying off the water from its surface; the slight inclination given to a flat roof, gutter, etc., to allow water to run away freely.

**CURRENT.** A "flow" which cannot take place without loss of electrical pressure, and does work in flowing.

**CURRENT DENSITY.** A term used in connection with the current in a conductor; it connects the value of the current in amperes with the cross section of the conductor in square inches. "Current density" shows the current that would flow in a given conductor if its area were increased or diminished to one square inch.

**CURTAIN STEP.** In stairs, is when the lower or first step of a flight of stairs has its outer end in the form of a spiral or scroll.

**CURTAIN.** In fortifications, that part of the rampart which is between the flanks of two bastions.

**CURTILAGE.** A term formerly applied to the division or boundary of manorial lands; a yard, garden, enclosure or field near and belonging to a dwelling.

**CURULE.** Among the Romans, a sort of folding stool without a back, conveyed in a chariot, which only the chief magistrates were permitted to sit upon; sometimes called "Hamlet stool".

**CURVATURE.** The continual flexure or bending of a line from a rectilinear direction.

**CURVE.** In geometry, a line of which no three consecutive points are in the same straight line; a bending without angles.

**CURVED BATTER.** Is when the vertical section of the face of a wall is to be curved.

**CURVED BRICKWORK.** Is often described as "flat sweep" when over twenty-five feet radius, and "quick sweep" when under twenty-five feet radius.

**CURVE OF EQUILIBRIUM.** Or the line of resistance is the pressure arising from the weight of an arch, and its superincumbent load being transmitted to the abutments on which it rests in a curved line passing through the thickness of the arch.

**CURVILINEAR.** Consisting of, bounded by, curved lines.

**CURVILINEAR ROOF.** Is one erected on a curved plan, such as circular, elliptical, etc.

**CURVITY.** Bending in a regular form.

**CUSHION CAPITAL.** Resembles a cushion pressed down by a weight; used in very early mediæval architecture; it is sometimes in the form of a cube with the lower corners and edges rounded; largely used in the Norman period.

**CUSHION RAFTER.** Same as Principal Rafter.

**CUSPS.** Is a term used in tracery work; they most frequently occur in window tracery, also in other minute arch work, such as panelling to pulpits, seat ends, etc.; cusps are the points formed by two parts of a curve meeting, but especially applied to the projecting points formed by the meeting of the small arches or foils in tracery or foil arches, etc.; they are sometimes ornamented at the ends with heads, leaves or flowers, and frequently a moulding is run round them.

**CUSTOMARY SQUARE.** A term applied by timber merchants to a quantity of flooring boards which it is "customary" to consider equal to a hundred feet.

**CUSTOMARY SQUARE.** A term used by timber merchants signifying the quantity of flooring boards which are usually reckoned equal to 100 square feet. These quantities are:—

9 in.	by 140 ft.
8 in.	„ 160 ft.
7½ in.	„ 170 ft.
7 in.	„ 180 ft.
6¾ in.	„ 185 ft.
6 in.	„ 200 ft.
5¾ in.	„ 210 ft.
5½ in.	„ 220 ft.
5¼ in.	„ 230 ft.
5 in.	„ 240 ft.

**CUSTOM HOUSE.** The establishment by means of which the Customs revenue is collected and regulations enforced.

**CUT.** In mining, to intersect a vein, branch or lode by driving horizontally or sinking perpendicularly at right angles.

**CUT.** In timber sawing, a longitudinal saw cut through the width of a deal is termed a "deep cut"; a saw cut through the thickness is termed a "flat cut," and a cut across the grain a "cross cut"; cut

into a triangular section, it is said to be cut arris-wise.

**CUT.** In painting, a colour is said to be "cut" when it meets another at a line of junction; generally described in quantities as "cutting in lines" or "lines cut in".

**CUT.** A channel made by cutting or digging; a trench. Same as Canal.

**CUT.** In glazing, to "cut in" is to stop in with putty; in painting, when one colour meets another it is said to be "cut into" the other, the extra labour being described as "cutting in lines". In excavation, a trench.

**CUT AND COVER.** A tunnel which has been constructed by excavating an open cutting; building the brick-work and then filling in is said to have been done by "cut and cover".

**CUT AND MITRED BEAD.** The bead round a sash hung on centres; one half of the bead is fixed to the sash and the other to the frame.

**CUT AND MITRED STRINGS.** In staircasing, are those in which the ends of the risers are mitred to the string.

**CUT BRACKET.** One moulded on the edge.

**CUTCHERY.** A court of justice in the East Indies.

**CUT CLASP NAILS.** Have heads nearly flat on both sides, and are used for fixing skirtings, linings, and ordinary joinery.

**CUT DEALS.** Are those less than two inches thick.

**CUT LINES.** In glazing, the working drawings upon which the glazing together of the lights are done.

**CUT LOCK.** A lock which is let or sunk into the woodwork.

**CUT NAILS.** Are those cut by machinery out of sheets of iron; they are termed "cut" to distinguish them from hand-made nails.

**CUT OUT.** A contrivance for automatically breaking the electrical circuit, generally by means of a fuse, in the event of the currents rising dangerously high. Some "cut outs," by means of an electro magnet, replace themselves and restore the circuit when the current becomes normal.

**CUT ROOF.** One that is truncated.

**CUT STANDARDS.** The upright pieces supporting the shelves above a dresser, etc., when cut into mouldings or when diminished in width or stepped out, are said to be cut.

**CUT STONE PLINTH COURSE.** Is the term applied to the top course of stone when the plinth at the base of a wall has been formed by allowing two or three courses to project beyond the face of the wall, the top course being chamfered to throw the water off.

**CUT STONES.** Is a term applied to all hewn or squared stones, or that brought into shape by mallet and chisel, with dressed beds and joints.

**CUT STRING.** In staircasing, those sawn or notched out to receive the ends of the treads and risers.

**CUTTER BAR.** In mechanics, the bar of a boring machine in which the cutters or cutting tools are fixed.

**CUTTERS.** A term applied to the cutting irons of a machine.

**CUTTERS or RUBBERS.** Are bricks intended to be cut or rubbed to a shape different from what they were moulded.

**CUTTING.** An excavation through a hill in making a road, railway, canal, etc.

**CUTTING GAUGE.** A joiner's gauge provided with a sharp cutting blade.

**CUTTING IN.** Consists of fitting and fixing glass into lead work, sashes, etc.; in glazing, to "cut in" is the same as to "stop in".

**CUTTING PLANE.** A plane dividing or cutting a solid into two parts in any direction.

**CUT TOOTH AND BOND.** Is to cut out the necessary "toothings" in an old wall so as to bond the new work to it.

**CUTTY STOOL.** A bench in old Scottish churches, where wanton female offenders against chastity were compelled to sit three Sundays, and were publicly rebuked.

**CWT.** A hundredweight.

**CYANATE.** A salt of cyanic acid.

**CYANIC ACID.** A compound of cyanogen and oxygen.

**CYANIDE.** A compound of cyanogen with a metal or element.

**CYANINE.** A blue colouring matter.

**CYANITE.** Is a fireproof solution used for preserving timber from fire.

**CYANOGEN.** An essential ingredient in Prussian blue; a gas composed of one equivalent of nitrogen and one of carbon; burns with a pink flame edged with green.

**CYCLOGRAPH or ARCOGRAPH.** An instrument for describing the arcs of large circles; chiefly used in flat segments or those whose curvatures approach to straight lines.

**CYCLOID or TROCHOID.** Is a curve produced by assuming a nail to be fixed at any point in the circumference of a circle or wheel which is made to roll along a straight line, the nail thus marking the curve as the circle or wheel revolves; if the nail, instead of being put in the circumference, is placed at any point in the radius the curve described is a protate or inflected cycloid, or if it be placed in the radius produced without the circle it is a curtate cycloid.

**CYCLOIDAL ARCH.** Is one whose curve is produced by the rolling forward of a circle on a straight line.

**CYCLOPEAN ARCHITECTURE.** A very massive kind of architecture of the earliest ages, supposed to have preceded the invention of the classic orders in Greece; erected at an enormous expenditure of physical force.

**CYCLOPEAN WALL.** A large irregular mass of stone having three, four, five or more sides, hewn only on the irregular sides to be built upon; it is the oldest example of masonry in Italy.

**CYCLOSTYLAR.** A term signifying a structure composed of a circular range of columns without a core; when with a core the range is termed a peristyle.

**CYLINDER.** A long roller-like body, solid or hollow, of uniform circumference.

**CYLINDER.** A cylinder, strictly speaking, has a circular base, but prisms having any base whatever, if used for handrailing or other purposes, are called cylinders.

**CYLINDER GLASS.** Sheet glass; so called because the sheet is first blown into the form of a cylinder.

**CYLINDRICAL CEILING or VAULTING.** One that is in the shape of the segment of a cylinder; sometimes erroneously called a "waggon headed ceiling".

**CYLINDRICAL VAULT.** Is simply a semi-circular arch, the ends of which are closed by upright walls; a vault without groins, resting upon two parallel walls.

**CYLINDRICAL WALLING.** That built upon a circular plan, forming a cylinder.

**CYLINDRICAL WORK.** Any kind of work which partakes of the shape of a cylinder.

**CYLINDRO-CYLINDRIC ARCH.** Is when one cylinder pierces another of greater altitude; the arch formed is termed a cylindro-cylindric arch.

**CYLINDROID.** Is a solid which differs from a cylinder in having ellipses instead of circles for its ends or bases.

**CYLING.** Anciently, ceiling.

**CYMA or CYMATIUM.** Is the uppermost moulding or member of a cornice whose section or profile is convex below and concave above, also called "cyma-recta".

**CYMA-REVERSA or OGEE.** Is a compound moulding, being convex at top and concave at bottom; consequently, the reverse of a cyma-recta.

**CYMATIUM.** A moulding whose section somewhat resembles the letter S.

**CYMATIUM.** In sculpture, carved work resembling rolling waves.

**CYMBIA.** Same as Fillet.

**CYMOPHANE.** A mineral of a green colour, resembling the chrysoberyl.

**CYPRESS or CYPRUS** (*Cupressus sempervirens*). Is found in Persia, Asia Minor, Cyprus, etc.; it is strong, very durable, and is sometimes known as cedar; used in

**Candia and Malta** for building purposes.

**CYPRESS.** The emblem of mourning for the dead, cypress branches having been anciently used at funerals.

**CYPRINE.** A blue mineral found in Norway.

**CYTOSTYLE.** A circular projecting portico.

**CYZICENUS.** Anciently, a hall decorated with sculpture.

## D.

**D.** As a numeral, D represents five hundred, and when a dash or stroke is placed over it, it denotes five thousand.

**D TRAP.** In sanitary work, a lead trap shaped like the letter D; generally used in connection with a lead soil pipe.

**DABBED or DAUBED.** In masonry, the same as pointed or punched; sometimes called "puncheon dabbled," "close picked stone," etc.

**DACTYLUS.** A Greek measure of length, the sixteenth part of an English foot.

**DADO or DIE.** The general plane surface of a pedestal or stylobate, or the solid block or cube forming the body of the pedestal between the upper and lower mouldings.

**DADO.** The arrangement of mouldings, panelling, etc., round the lower part of the walls of a room, and sometimes down a staircase; it is sometimes formed in wallpaper, of a different pattern to that used for the rest of the room.

**DADO RAIL.** A wood rail running round a room on the top of a dado which may be either paper or framing.

**DAGABA.** A Buddhist relic temple.

**DAGON.** The god of the Philistines, half man, or half woman, and half fish; sometimes introduced into ornamentation.

**DAIRY.** The department of a farm or the place where milk is produced and kept, or converted into cream, cheese, etc.; a shop for the sale of dairy produce.

**DAIS.** A raised floor at the upper end of a dining hall; formerly the chief seat at the principal table, and the table itself, in a baronial hall.

**DAIS.** A canopy to cover an altar,

throne or tribunal; a raised seat; the chief or upper table in a monastery.

**DALI or DARI.** A majestic tree of great commercial value, growing in Demarara.

**DALMATICA.** A long white gown with sleeves, worn by deacons in the Roman Catholic Church; introduced from Dalmatia.

**DAM.** A bank or mound of earth raised to obstruct a current of water and collect it.

**DAMASK or DAMASCUS STEEL.** A fine steel from the Levant, chiefly from Damascus; used for sword and cutlass blades.

**DAMASKEEN.** To inlay iron, steel, etc., with designs in gold or silver, or to engrave or etch them ornamentally; also spelt "damasquine".

**DAMMAR.** A species of gum used for making varnish; obtained from the East India Islands, from a species of dammara, a tree allied to the pines.

**DAMONICO or MONICON.** An iron ochre, being a compound of terra di sienna and Roman ochre burnt and having all their qualities.

**DAMP BLUE.** Is a chemical compound containing alum and other substances.

**DAMP COURSE or DAMP-PROOF COURSE.** Is a term applied to a layer of slate, sheet lead, asphalt, or other material impervious to water, laid in cement or other durable material the full width of the wall, and laid beneath the level of the lowest timbers and at a height not exceeding six inches above the ground; used to prevent the damp from rising.

**DAMPER.** A valve or sliding plate in a flue to regulate the draught of air.

**DAMPS.** Noxious exhalations issuing from the earth; choke damp consists chiefly of carbonic acid gas, and fire damp of carburetted hydrogen gas; generally met with in mines and wells.

**DAN.** A small truck; used in coal mines.




**DANCETTE.** The chevron or zigzag moulding used in Norman architecture.

**DANCING STEPS.** Same as Balanced Steps.

**DANDERS.** In the north of England, a term applied to ashes.

**DANTZIC DEAL.** Is imported from Dantzic or Memel; it is imported in balks about eighteen to forty feet in length and from fourteen to eighteen inches square; also in deals from twenty to fifty feet long and from two to five inches thick; it is strong, tough, durable, but often very knotty; it is used for carpentry and joinery, such as floor joists, wall plates, doors, etc.

**DANTZIC DEAL.** The quality marks on Dantzic deal are:—

-  = Best middling.
-  = Good middling.
-  = Common middling.

**DANTZIC OAK.** Is of a dark brown colour, close, straight and compact in grain, free from knots, bright medullary rays, moderately durable, very elastic and easily bent when steamed; found chiefly in Poland; imported in logs eighteen to thirty feet long, and from ten to sixteen inches square, also in planks.

**DAPEDIUM or DAPEDIUS.** A ganoid fish with scales arranged as squares in a tessellated pavement.

**DAPEDON.** A Greek term for a pavement.

**DARK AGES.** Were periods when the monks and ecclesiastics were the only learned persons.

**DATHOLITE.** Glassy crystals, usually colourless, or slightly

yellowish, and consisting of silica, boracic acid and lime.

**DATUM-LINE.** In engineering, the line along a fixed plane, from which are reckoned all the heights along a section.

**DAVINA.** A mineral of a hexahedral form, found on Vesuvius and named after Sir H. Davy.

**DAWK.** A hollow or incision in timber.

**DAY-BOOK.** A book in which are recorded the debts and credits or accounts of the day.

**DAY COAL.** The upper stratum of coal.

**DAYLIGHT REFLECTOR.** A reflector of polished metal placed at or over a window to throw in more light.

**DAYS.** The lights of a window or the spaces between the mullions.

**DAZABA.** An Indian tomb of conical shape.

**DEAD.** Same as Blind or Blank, when applied to a wall or window.

**DEAD BURNT LIME.** Is that which has been imperfectly calcined and will not slake with water.

**DEAD EARTH.** A term applied when the insulation of a cable or wire breaks down, and the conductor comes into good contact with the earth or conductor well connected with or buried in the earth.

**DEAD GILDING.** Gilding with a matt or unpolished surface.

**DEAD KNOTS.** Are generally darker in colour than live knots, and are frequently surrounded by a black ring; they are caused by the inner portions of branches being dead when the tree is felled.

**DEAD LEVEL.** In surveying, a flat country which offers no obstruction to railway or road making.

**DEAD LOAD.** Is that which is very gradually applied and which remains steady or permanent.

**DEAD LOCK.** A lock with a single bolt which is shot with a key only.

**DEAD PLATE.** The iron plate between the door of a furnace and the front of the bars.

**DEADS.** Among miners, the earth or other fossil substances which enclose the ore on every side.

**DEAD SEWERS.** Disused sewers fallen into decay.

**DEAD SHORE.** A vertical piece of timber employed as a temporary column or post for supporting floors, etc.

**DEAD WALL.** A wall with no windows or openings; a blank wall.

**DEAD WIRE (Electric).** A wire is "dead" if it is entirely cut off from the direct supply. So long as either end of a wire runs to the mains, or any source of supply, it is said to be a "live" wire.

**DEAFENING OR DEADENING BOUND BOARDING.** The pugging used to prevent the passage of sound through wooden partitions.

**DEAL.** Is a plank nine inches wide, and not exceeding four inches thick; also applied to fir timber when sawn into convenient dimensions as in joiners' work; three-inch and four-inch deals should never be used for cutting into boards as they are cut from the centres of the logs.

**DEAL DOOR.** A skeleton-framed white or yellow deal door, with styles four and a half inches wide, and the rails nine inches wide.

**DEAMBULATORY.** An ambulatory or cloister for exercise; also the aisles of a church, or the porticoes round the body of a church.

**DEANERY.** The house of a dean.

**DEARN.** A door post, or threshold; to conceal or shut up.

**DEBACLE.** A violent rush of water which hurls massive rocks and gravel and all opposing objects before it.

**DEBENTURE.** A deed of mortgage for repayment with interest of money lent; a note acknowledging a debt.

**DEBIT.** The left-hand side of the ledger where all articles charged to an account are entered; that which is entered in an account as a debt.

**DEBLAI.** Cutting; removal; a French term used in connection with fortifications.

**DÉBOUCHURE.** The mouth of a river or strait.

**DÉBRIS.** Ruins or fragments of rock and other substances piled up in confusion, as the wreck of some wasteful force or disaster.

**DEBTOR.** The side of an account in which debts are charged.

**DECAGON.** In geometry, is a ten-sided figure or polygon with its sides at an angle of 144°.

**DECAHEDRAL.** Having ten sides.

**DECAHEDRON.** A solid body having ten sides.

**DECALCIFY.** To deprive of lime.

**DECALITRE.** A French measure of capacity containing ten litres or 610·27 cubic inches.

**DECANGULAR.** In geometry, having ten angles.

**DECANICUM.** An ecclesiastical prison.

**DECASTYLE.** A portico with ten columns in front.

**DECEMPEDA.** A ten-foot rod used by architects and surveyors for taking measurements.

**DECEMVIRI.** Ten magistrates who at one time had absolute authority in ancient Rome.

**DECILITRE.** A French measure of capacity equal to one-tenth of a litre or 0·176 pint.

**DECILLION.** A number involved to the tenth power or one followed by sixty ciphers.

**DECIMAL.** The tenth part; a fraction having some power of ten for its denominator.

**DECIMAL ARITHMETIC.** A term applied to a system of arithmetic in which the scale of numbers proceeds by tens.

**DECIMAL CURRENCY.** Is a currency whose denominations increase or decrease in a tenfold ratio.

**DECIMAL SYSTEM.** A French system of money, weights and measures, in which the standard unit is multiplied and divided by ten.

**DÉCIMÈTRE.** A French measure of length equal to the tenth of a metre, 3·937 inches.

**DECK DEALS or RED DEALS.** Are from two to four inches thick; they are imported from the Prussian ports of Dantzic, Memel, Stettin, etc.

**DECLINATION OF THE COMPASS or NEEDLE.** In electricity, the variation of the needle from the true meridian of a place.

**DECLIVITY.** Land or a surface that slopes downward.

**DECORATED.** An ornate style of Gothic architecture.

**DECORATED STYLE OF ARCHITECTURE.** Is a style which prevailed during the greater part of the fourteenth century; it is characterised by the geometrical tracery in windows, enriched doorways, and beautifully arranged mouldings.

**DECUSSATE.** To intersect at acute angles or in the form of an X.

**DEEP CAPPAGE BROWN** or **MINERAL BROWN.** Is produced from bog earth or manganese.

**DEEP WELL.** A well sunk through an impervious stratum into a water-bearing formation.

**DEFICIENT NUMBERS.** In arithmetic, those numbers the sum of whose aliquot parts is less than the numbers themselves.

**DEFILADING.** In fortifications, the planting of a line of rampart round a fortress.

**DEFLECTION.** When a beam or joist is supported at each end the distance to which the middle is forced down below its original position by the load applied is termed its "deflection".

**DEFLECTION.** The distance by which a curve departs from another curve or from a straight line.

**DEFORMABLE FIGURE.** A rectilinear figure which can be altered in shape on the supposition that there is a joint at each angle.

**DEGREE.** The three hundred and sixtieth part of the circumference of a circle; sixty geographical miles; a division, space or interval marked on a mathematical or other instrument.

**DELFT.** An earthenware glazed over, originally manufactured at Delft, in Holland.

**DELIAC.** A kind of sculptured vase.

**DELICATE TINTS.** A term applied in painting to some expensive colours, such as pink, pea green, verditer, etc.

**DELIQUE.** A term applied by Vitruvius to designate the rafters which formed the ridge of the roof

and threw the water on each side; gutters or drains.

**DELIVER.** When a pattern has been constructed so that it can be drawn easily from the sand leaving a perfect mould it is said to deliver well.

**DELLA ROBBIA WARE.** An earthenware founded on terra-cotta; so called after the reviver of the art.

**DELPH.** A stone quarry.

**DELPHICA.** A table made of marble or bronze and resembling a tripod.

**DELTA.** The Greek letter D, written  $\Delta$ ; a tract of alluvial land at the mouth of the Nile shaped like a delta; any alluvial deposit at the mouth of a river.

**DELTA METAL** or **DICKS METAL.** Is an improved brass made hard and tough; it can be rolled hot, forged and worked, and drawn in wire when cold; it makes superior castings.

**DELUBRUM.** A font or baptismal basin; anciently, a church, chapel, temple or consecrated place; also applied to that part of a Roman temple in which the altar or statue of the deity was erected.

**DEMESNE.** The manor house and lands near, which a lord keeps in his own hands for his own purposes; an estate in land.

**DEMI-BASTION.** In fortifications, part of a crown-work with one face and one flank cut off by the capital.

**DEMI-DISTANCE.** In fortifications, the distance between the outward polygons and the flank.

**DEMI-GORGE.** In fortifications, that part of the polygon which remains after the flank is raised, and goes from the curtain to the angle of the polygon.

**DEMI-LUNE.** In fortifications, a half moon or work constructed for the defence of the curtain and shoulders of the bastion.

**DEMI-RELIEVO.** In sculpture, half raised figures from the plane; half relief.

**DEMI-TINT.** In painting, a graduation of colour between positive light and positive shade.

**DENDICULUS.** A member in the Ionic and Corinthian entablatures, occurring between the zophorus and corona.

**DENDRITE.** A mineral on or in which are the figures of vegetable forms.

**DENDROMETER.** An instrument for measuring trees.

**DENSITY.** The ratio of mass in a body to bulk.

**DENTIL.** Small upright blocks, composed of similar and equal projecting solids, disposed in a row of equal intervals in a cornice, and presenting four sides of a rectangular prism; used in the bed mouldings of Ionic, Corinthian and Composite cornices.

**DENTIL BAND.** In classic architecture, a series of small blocks resembling square-shaped teeth dentils.

**DENTIL CORNICE.** Is a cornice distinguished by a denticulated band or ranges of dentils in the bed moulding which is heightened by mouldings placed above and below.

**DENTIL MODILLION CORNICE.** Is when both the dentils and modillions are adopted in the projecting frieze and cornice.

**DENUATION.** The laying of rocks bare by the washing away of all overlying deposits.

**DEODAR.** A cedar; a Hindu sacred tree.

**DEPARTER.** One who refines metals by separation.

**DEPETER.** Consists of a pricked up coat of "coarse stuff" having small stones pressed into it while soft so as to produce a rough surface.

**DEPRETOR.** External plastering finished so as to represent tooled stone.

**DERBY FLOAT.** In plastering, is a long wooden board with a flat face and two handles; requires two men to work it; it is used in three coat work for floating the second coat to a smooth level surface.

**DERBYSHIRE SPAR.** Fluor-spar or fluoride of calcium; found in Derbyshire.

**DERRICK.** A one-legged support for a pulley for hoisting.

**DERRICK.** A Cornish term for a miner.

**DERRICK CRANE.** See Movable Derrick.

**DESCENT.** In mechanics, the motion of a body caused by the attractions of gravity.

**DESCRIBE.** To delineate the form or figure.

**DESCRIPTIVE GEOMETRY.** Is that which consists in the application of geometrical rules to the representation of the figures, and the various relations of the forms of bodies, according to conventional forms.

**DESICCATION.** The chemical operation of drying bodies, such as by the air pump warm chambers, etc.

**DESIGN.** A sketch; a plan.

**DESIGNING.** The art of delineating or drawing the appearance of natural objects by lines.

**DESILVERISATION.** The process of removing the silver present in lead ore.

**DESK.** The pulpit in a church, or the place from which prayers are read; a sloping table for writing on or for reading from.

**DESMINE.** A mineral that crystallises in little silken tufts; found in the lavas of extinct volcanoes.

**DESSICATION.** Seasoning timber by exposure to a current of hot air.

**DESTINA.** A term applied by Vitruvius to a column or pillar to support an edifice.

**DETACHED HOUSE.** One standing alone in its own ground.

**DETAILS or DETAIL DRAWINGS.** Is a term applied to drawings or sections of work showing details of construction which could not be explained in the general or working drawings; they are usually half or full size; by means of details the architect is enabled to give expression to his design and also convey a clear description of his wants.

**DETERMINABLE FREEHOLDS.** Estates for life which may determine upon future contingencies before the life for which they are created expires.

**DETERMINING LINE.** In the conic sections, is the line parallel to the base of the cone; in the hyperbola this line is within the base; in the parabolic sections it forms a tangent to the base; in the elliptic it falls without it.

**DETRAMPE.** Painting in water-colours.

**DETRUSION.** A thrusting out, such as of the fibres of a tie beam, wall plate, etc., by the end of a rafter.

**DEVELOPMENT.** Is a curved surface as it appears after it has been taken from the solid whose outside it formed, and then laid flat upon a plain surface.

**DEVICE.** An emblem intended to represent a family, person, action or quality with a suitable motto; used in painting, sculpture and heraldry.

**DEVIL.** Is a small portable fire-grate used by plumbers for heating soldering irons and melting lead.

**DEVITRIFICATION.** The act of depriving glass of its transparency and converting it into a grey opaque substance.

**DEVONIAN.** Belonging to the old red sandstone system as found in Devonshire.

**DEVONPORT.** A kind of small writing-table, fitted up with drawers and other conveniences.

**DEWSTONE.** A species of English limestone which collects dew largely.

**DHAGOA.** A mound with a dome-shaped top containing Buddhist relics.

**DIACAUSTIC CURVE.** The curve formed by refraction.

**DIACHYLUM.** A plaster made by boiling protoxide of lead with olive oil.

**DIACONICUM.** In ancient architecture, the term applied to the sacristy or vestry.

**DIACOUSTICS.** The science of sounds refracted by passing through media possessed of different densities.

**DIADEM.** Anciently, a head band or fillet worn as a badge of royalty.

**DIAGLYPHIC.** In sculpture, sunk into the general surface.

**DIAGOMETER.** An electrical apparatus used for the purpose of ascertaining the conducting power of oil, as a means of detecting its adulteration.

**DIAGONAL.** A straight line drawn through a figure joining two opposite angles.

**DIAGONAL BOND.** Consists of diagonal courses of bricks introduced here and there to increase the strength of thick walls, and make up for the deficiency of stretchers in the interior.

**DIAGONAL RIB.** A projecting band of stone or timber passing diagonally from one angle of a vaulted ceiling across the centre to the opposite angle.

**DIAGONAL SCALE.** A compound scale formed by vertical and horizontal subdivisions with diagonals drawn across them, for measuring off very small parts by means of equidistant parallels crossing others of the same kind.

**DIAGONAL TIE.** A long iron rod passing from the foot of a principal rafter diagonally across several trusses to the ridge of a roof.

**DIAGRAM.** A drawing for the purpose of demonstrating the properties of any figure, as a square, triangle, circle, etc.

**DIAGRAPH.** An instrument used in perspective drawing.

**DIALLAGA.** A dark green or bronze-coloured taminated mineral; it is one of the constituents of serpentine or soapstone and some varieties of syenite.

**DIALLOGITE.** A mineral of a rose-red colour.

**DIAMAGNETIC.** A diamagnetic body opposes the flow of magnetic lines of force. Bismuth, antimony, copper, air, etc., are diamagnetic.

**DIAMETER.** A straight line passing through the centre of a circle from circumference to circumference, and dividing it into two equal parts.

**DIAMICTON.** A term applied by the ancients to the method of constructing walls; the exterior of masonry and the interior of rubble.

**DIAMOND.** The glazier's or the pencil diamond used in cutting

glass is a small fractured piece of diamond.

**DIAMOND PANEL STONE.** Is when the surface of the stone rises gradually from the inner lines of the draft to the middle of the panel; if the space between the drafts or margins is sunk immediately adjoining them and then rises gradually until the four planes form an apex in the middle of the panel, it is known as a "sunk panel".

**DIAMOND PAVEMENT.** One consisting of squares arranged diagonally.

**DIAMOND SHAPED.** Having the figure of an oblique-angled parallelogram or rhombus.

**DIAPER.** A panel or flat recessed surface covered with carving or other wrought work in low relief.

**DIAPER ORNAMENT.** Was first introduced in the Early English style; it consists of flowers applied to a plain surface either carved or painted; when carved the flowers are entirely sunk into the work below the general surface.

**DIAPER WORK.** The face of stone or other material worked into squares or lozenges.

**DIAPHANIE.** The art of affixing coloured transparencies on glass with the effect as of staining it.

**DIAPHONICS.** The doctrine of refracted sound.

**DIAPHRAGM VALVE.** A valve in which the opening is closed by screwing down a flexible diaphragm over it.

**DIASTYLE.** An arrangement of columns in Grecian and Roman architecture, in which the space between them is equal to three or four diameters of the shaft.

**DIATHYRA.** The vestibule before the doors of a Greek house, similar to the prothyra of the Romans.

**DIATOMOUS.** Having crystals in one distinct diagonal cleavage.

**DIATONI.** A term applied by Vitruvius to the girders or band stones formerly employed in constructing walls; corner stones.

**DIATONI.** In ancient architecture, the angle stones of a wall wrought on two faces, and which from

stretching beyond the stones above and below them formed a bond or tie to the work.

**DIATRETUM.** An enchased or curiously engraved vase or drinking cup.

**DIAULON.** Ancient term for a racecourse.

**DIAZONIA.** In ancient architecture, the landings or resting places which at different heights encircled the amphitheatre, like bands or cinctures.

**DICAS TERIUM.** A tribunal or hall of justice used by the ancients.

**DICE COAL.** A local name for cubical coal.

**DICTATOR.** In ancient Rome, one invested with absolute authority, in times of exigence and danger.

**DICTYOTHETON.** In ancient architecture, masonry worked in courses, like the meshes of a net; also applied to open lattice work for admitting light and air.

**DIDECAHEDRAL.** Having the form of a ten-sided prism with five-sided summits.

**DIDODECAHEDRAL.** Having the form of a twelve-sided prism with six-sided summits.

**DIDRACHMA.** A Grecian piece of money, the fourth of an ounce of silver.

**DIDYMIUM.** A very rare metal like and united with lanthanum.

**DIE.** The cube or dado of a pedestal; a naked square cube; a flat tablet; any cubical body.

**DIELECTRIC.** A dielectric opposes the flow of an electric current. Dielectrics are used for insulating purposes.

**DIELECTRIC.** A body, such as glass, which has small power of conducting electricity but is capable of being polarised and so acting by induction.

**DIES.** Consist of two pieces of hardened steel, which, when placed together in a holder called a stock, form a female screw which has cutting edges; used for cutting a thread on iron pipes, bolts, etc.

**DIE SQUARE.** Timber when sawn to equal dimensions each way is said to be "die square".

**DIEU ET MON DROIT.** The motto of the royal arms of England, first assumed by Richard the First; it signifies "God and my right".

**DIFFERENTIAL CALCULUS.** In mathematics, the method of finding the ratios of differences of variable magnitudes on the supposition that these differences become infinitely small.

**DIFFERENTIAL COEFFICIENT.** In mathematics, the ratio of the differential of any function of a variable quantity to the differential of the variable.

**DIFFERENTIAL GEAR.** A combination of toothed wheels by which a differential motion is produced.

**DIFFERENTIAL PULLEY BLOCKS.** Those consisting of two blocks, the upper one being double and having one of the sheaves (which are both on one axle) slightly larger than the other, the lower one being a single block.

**DIFFERENTIAL SCREW.** A compound screw by which a differential motion is produced.

**DIFFERENTIAL THERMOMETER.** A thermometer for measuring minute differences of temperature.

**DIFFRACT.** To bend from a straight line; to break into parts.

**DIGAMMA.** A letter in the ancient Greek alphabet which gradually fell into disuse except among the Æolians, and had the sound of V.

**DIGIT.** A measure of length containing three-fourths of an inch; a term used to signify any symbol of number from nothing to nine.

**DIGLYPH.** A projecting face which has two panels or channels sunk in it; an imperfect triglyph.

**DIHEDRAL.** Having two sides or faces.

**DIHEDRON.** A figure having two sides or surfaces.

**DIHEXAHEDRAL.** In the form of a hexahedral prism with trihedral summits.

**DIKE.** A ditch; the bank of earth thrown up in digging it; a mound of earth, stones or other materials, to prevent low lands from being inundated by the sea or river; a perpendicular wall-like mass of

igneous rock occupying the rents or fissures of stratified rocks.

**DILAPIDATION.** The state of decay and ruin into which a building has been allowed to fall; the wasting or suffering to go to decay of Church property in possession of an incumbent.

**DILLEUING.** A Cornish term applied to a method of washing the dressing of tin in very fine hairsieves.

**DILUENT.** The liquid used to thin the paint to enable it to be easily spread.

**DILUVIUM.** A deposit of superficial loam, sand, gravel, etc., caused by currents of water.

**DILVING.** A method in dressing tin ore, of shaking it in a canvas sieve, in a tub of water.

**DIMENSIONS.** Are sizes, or measures in length, breadth, thickness or depth. 1. General dimensions: size, magnitude, dimension, bulk, volume, largeness, massiveness. 2. Linear dimensions. 3. Central.

**DIMENSION STONES.** Cut stones, all of whose dimensions have been fixed in advance.

**DIMINISHED or DIMINUTION.** Are terms expressing the gradual decrease of thickness of a solid body, such as a column, etc.

**DIMINISHED ARCHES.** Those lower or less than a semicircle.

**DIMINISHED BAR.** The bar of a sash thinner on the edge towards the room than on that towards the glass of the window.

**DIMINISHED COLUMN.** A column in which the upper diameter is less than the lower; the contraction of the diameter as it ascends from its base to its capital.

**DIMINISHED STYLE.** Is one reduced in width in some part of its length, the styles in sash or margin; light doors are diminished above the lock rail; also called "Gunstock style".

**DIMINISHED PIECES.** Same as Taper Pipes.

**DIMINISHING RULE.** A board cut with a concave edge so as to ascertain the swell of a column, and to try its curvature, or it may be a board with the edges straight but tapering in width towards the end.

**DIMINISHING SCALE.** A scale of graduation used in finding the different points for drawing the spiral curve of the Ionic volute, by describing the arc of a circle through every three preceding points, the extreme point of the last arc being one of the next three; each point through which the curve passes is regulated so as to be in a line drawn to the centre of the volute and the lines at equal angles to each other.

**DIMORPHISM.** The property of crystallising in two distinct forms, as sulphur, which assumes one form when crystallising at a high temperature and another wholly different when becoming solid at the ordinary temperature.

**DINAS BRICKS.** Are used for the best furnace work; they are very tender but stand the greatest heat; they are made from Glamorganshire fireclay which consists almost entirely of sand, about 1 per cent. of lime, and enough water to bind it being added.

**DINGING.** Forcing the mortar into the joints of brickwork by means of a curved tool.

**DINGING.** In Scotland, ruling or drawing with a key; in Scotch "dinge" means dent.

**DINING HALL.** A hall to dine in.

**DINING ROOM.** A room to dine in.

**DINING TABLE.** A table for dining at.

**DINNER LIFT.** A small lift for conveying food from one floor to another.

**DINNER TABLE.** A dining table.

**DIOCTAHEDRAL.** In mineralogy, having the form of an octahedral prism with tetrahedral summits.

**DIOPHANTINE.** Relating to the analysis of Diophantus, the Greek mathematician.

**DIOPSIDE.** A foliated variety of augite which has a clear greyish-green colour.

**DIOPTASE OR EMERALD COPPER.** A rare ore of copper occurring in emerald green crystals.

**DIOPTRA.** A geometrical instrument used in measuring the altitude of distant objects, also for taking the levels of a source of water in-

tended to be conveyed to a distance by means of an aqueduct.

**DIOPTRICS.** That part of optics which treats of the refraction of light, or its transmission from one medium into another, differing in kind.

**DIORAMA.** A building for a dioramic exhibition.

**DIORITE.** A variety of green-stone.

**DIP.** In mining, the greatest inclination or slope of a stratum to the horizon.

**DI PALITO.** A light yellow ochre.

**DIPHRYGES.** A calx of melted copper gathered in the furnace when the metal was run out; the scorial sediment.

**DIPLINTHIUS.** A term applied by Vitruvius to a wall two bricks thick.

**DIPPING.** A term applied by miners to the interruption or breaking off of the vein of ore.

**DIPRISMATIC.** In mineralogy, having cleavages parallel to the sides of a four-sided vertical prism, and also to a horizontal prism; doubly prismatic.

**DIPTERAL.** A term applied to a temple which has eight columns in front and rear, and two rows of columns on each side.

**DIPTERON.** In ancient architecture, a temple surrounded with a double row of columns which form porticoes called wings or aisles.

**DIPTEROS.** A Greek temple with a double row of columns on each of the four sides.

**DIPTYCH.** A tablet, folded in two, of ivory, metal or wood externally; often beautifully carved, and containing a register of the names of consuls and other magistrates, among pagans, and of bishops, martyrs, and others, among Christians.

**DIRECTING LINE.** In perspective, the line in which an original plane would cut the directing plane.

**DIRECTING PLANE.** In perspective, a plane passing through the point of sight or the eye parallel to the drawing.

**DIRECTING POINT.** In perspective, is that in which any original

line produced cuts the directing plane.

**DIRECTOR OF THE EYE.** In perspective, the intersection of the plane with the directing plane perpendicular to the original plane and that of the drawing, thus also perpendicular to the directing and vanishing planes, since each of the two latter is parallel to each of the two former.

**DIRECTOR OF AN ORIGINAL LINE.** In perspective, the straight line passing through the directing point and the eye of a spectator.

**DIRECT RADIAL.** In perspective, a right line from the eye perpendicular to the drawing.

**DIRECTRIX.** Is a line perpendicular to the major axis of an ellipse; a straight line perpendicular to the axis of a conic section in relation to which its nature may be defined.

**DIRIGENT.** The line of motion along which the describent line or surface is carried in the generation of any plane or solid figure.

**DISC COUPLING.** A sort of coupling adopted in mill work, which consists of two discs keyed on the connected ends of the two shafts.

**DISCHARGE.** The relief given to a beam or any other piece of timber too much loaded by an incumbent weight.

**DISCHARGE.** A post trimmed up under a beam or part of a building which is weak or overcharged by weight.

**DISCHARGE.** To empty a cistern or reservoir.

**DISCHARGER.** In electricity, an instrument for discharging a Leyden phial, jar, etc., by opening a communication between the two surfaces.

**DISCHARGE-VALVE.** A valve which covers the top of the barrel of the air pump, and opens upwards.

**DISCHARGING ARCHES.** Are those built over door or window openings and to relieve or distribute the pressure. Same as Relieving Arch.

**DISCHARGING ROD.** A discharger.

**DISCONNECTING PIT.** A pit for disconnecting a house drain from a

main sewer; it is open to the air and discharges through a trap.

**DISCOUNT.** Is the sum deducted from an account—usually for prompt payment—note or bill of exchange, usually at some rate per cent.; the term discount is also used to cover the commission charged for advancing cash upon a bill before it is due for payment.

**DISCRETE PROPORTION.** When the ratio of two or more pairs of numbers or quantities is the same, but there is not the same proportion between all the numbers, as 3 : 6 : : 8 : 16.

**DISCRETE QUANTITY.** A quantity conceived of as made up of units, and distinct from a continued or continuous quantity.

**DISH.** In mining, a trough in which ore is measured.

**DISH.** In mechanics, concave like a dish.

**DISHED.** A term applied to a hole which has the edges cut on the slant, such as the seat of a water-closet.

**DISHING OUT.** See Cradling.

**DISH WHEELS.** Wheels which are concave on one side and convex on the other.

**DISINFECTANT.** An agent for removing what causes infection, as chlorine.

**DISK.** A flat circular surface.

**DISK PILE or DISC PILE.** Is a bearing or ordinary pile near the foot of which a disk is keyed or bolted in order to give additional bearing power.

**DISLOCATION.** The displacement of portions of a stratified rock from its original position.

**DISFLUVIATUM.** In ancient architecture, a place from which the rain is conveyed away in two channels.

**DISPOSITION.** In architecture, the arrangement of the whole design of a building.

**DISTANCE.** In perspective, the boundary of view in a picture or drawing.

**DISTANCE OF THE EYE.** In perspective, is the distance of the eye from the drawing in a line perpendicular to the plan thereof.

**DISTANCE OF VANISHING LINE.** Is the length of a perpendicular falling from the eye perpendicular to the vanishing plane.

**DISTEMPER.** Is a mixture of whiting, size and the required colouring matter; walls are said to be "distempered" when coloured with distemper.

**DISTEMPER.** The distemper used by the ancients before the year 1410 for painting pictures was a preparation of colours without oil, mixed with size, whites of eggs or any proper glutinous or unctuous substance.

**DISTRIBUTION.** In architecture, the dividing and disposing of the several parts of a building according to some plan or to the rules of art.

**DISTRICT SCHOOL.** A school within a certain district of a town.

**DISTRICT SURVEYOR.** A local officer legally appointed to superintend repairs, examine buildings, etc.

**DISULPHATE.** A salt containing one equivalent of sulphuric acid with two of the base.

**DISULPHURET.** A sulphuret containing two equivalents of the sulphur to one of the base.

**DITCH.** In fortifications, an excavation round the works from which the earth of the rampart has been dug; a trench in the earth made by digging, or any long hollow receptacle for water.

**DITETRAHEDRAL.** In mineralogy, having the form of a tetrahedral prism with dehdral summits.

**DITRIGLYPH.** An arrangement of two triglyphs in the frieze between the triglyphs that stand over the columns; used in the Doric order of architecture.

**DIVAN.** The great council, audience chamber or judicial tribunal of the Turkish Empire; any hall or saloon for the reception of company; a kind of sofa used in divans.

**DIVERGE.** To tend from a point in lines which recede farther and farther from each other.

**DIVERGENT LINES.** Are lines which proceed from the same point but separate or recede from each other.

**DIVIDEND.** The share of the interest or profit of stock in trade, or other employment, which belongs to each proprietor or shareholder, according to his proportion of the stock, shares, or capital; a part or share assigned to creditors out of the estate of a bankrupt; in arithmetic, the number to be divided.

**DIVIDICULUM.** In Rome, a tower on an aqueduct containing a large reservoir for water.

**DIVING STONE.** A species of jasper.

**DIVINING ROD.** A rod, commonly of hazel with forked branches, used by those who pretend to discover water or metals underground.

**DIVISION OF AN ORDER.** In architecture, the division of an order into two parts, namely, the column and entablature. The column is subdivided into three parts, *viz.*, the base, the shaft and the capital. The entablature is also divided into three parts, *viz.*, the architrave, the frieze and the cornice.

**DIVISOR.** In arithmetic, the number by which the dividend is divided.

**DOAB.** In India, a tract of land lying between two rivers at their confluence or junction.

**DOATINESS.** Is a defect produced in timber by imperfect seasoning or by exposure for a long time to a stagnant atmosphere; it appears in the form of spots or a speckled stain on the timber; chiefly found in buck, birch and American oak; it is a sign of incipient decay.

**DOBEREINER'S LAMP.** A light so called from its inventor; caused by a jet of hydrogen passing over spongy platinum.

**DOCIMACY.** The art or practice of assaying ores or metals; metallurgy.

**DOCIMASTIC.** Assaying by tests, especially ores or metals.

**DOCK.** A broad deep trench on the side of a harbour, or bank of a river, in which ships are built or repaired; an artificial enclosure or basin of water for the reception of ships; the enclosed space where a criminal stands in court.


**DOD.** Is a mould, used in making drain pipes, through which the clay is forced by machinery.

**DODECAGON.** A plane figure having twelve equal sides and angles.

**DODECAHEDRON.** One of the five platonic bodies or regular solids, its surface being composed of twelve equal and regular pentagons.

**DODECASTYLE.** A portico or building having twelve columns in front.

**DODONIAN.** Applied to Jupiter, worshipped in the temple of Dodona, where he had a famous oracle.

**DOG.** A piece of iron bent thus, , and pointed at each end; used for connecting large timbers; also used by sawyers to fasten a log of timber in a saw pit; an andiron.

**DOG.** In slating, is an iron straight edge with two sharp feet for driving into a block of wood, on which the edges of the slates are laid to be cut by the zax.

**DOG.** A spike with a head like a brad; an andiron.

**DOGANA.** A custom-house.

**DOG BARS.** Short vertical bars fixed on the bottom of a gate to prevent dogs, etc., getting through.

**DOGE.** The name of the chief magistrates of Venice and Genoa.

**DOG FISH.** A small species of shark, the liver of which yields oil, and the rough skins are used for polishing wood.

**DOGGAR.** A coarse ironstone.

**DOGGER.** A sort of stone found in the mines with the true alum rock containing some alum.

**DOG GRATE.** Similar to an andiron.

**DOG-LEGGED STAIR.** Is one in which the outer strings of the progressive and retrogressive flights stand directly over one another, thus the flights return without forming a well hole.

**DOG NAILS.** Are large nails used for securing heavy ironwork, or other purposes where the heads are not required to be flush with the surface of the work; the heads—which are sometimes hemispherical or “die heads”—are made solid and slightly countersunk, the shanks

being generally round and the points flat.

**DOG'S EAR, WELT or PIG'S-LUG.** Is a method of forming vertical and other angles in lead gutters, cisterns, etc.; it consists of folding and dressing the lead back in the angle.

**DOG'S TOOTH.** In brickwork, a cornice ornamented by bricks laid diagonally with one angle projecting is called a “dog's tooth” cornice.

**DOG'S TOOTH BOND.** In masonry, a method of bonding a wall together by means of headers extending about two-thirds through the wall, and inserted alternately on each side.

**DOG'S TOOTH MOULDING.** In Norman architecture, a moulding ornamented with small pyramids, called “dog tooth” ornaments.

**DOG-TOOTH CORNICE.** A cornice ornamented with bricks laid diagonally with one angle projecting.

**DOG WOOD.** A common name of different species of the cornus or cornelian cherry.

**DOLERITE.** A trap rock composed of augite and labradorite; so called from the difficulty of distinguishing these components.

**DOLICHOSAURUS.** A reptile of about three feet, found in the chalk.

**DOLLY.** A perforated board placed over a tub used to wash ore in.

**DOLLY.** A piece of timber placed on the top of a pile while it is being driven, to receive the blows of the ram or monkey.

**DOLMEN.** A large unhewn stone resting on others; a gallery of several blocks raised on pillars.

**DOLOMITE.** A massive magnesian limestone, consisting of a crystalline carbonate of lime and carbonate of magnesia; so called from the geologist Dolomien; used by the ancient sculptors for their best work.

**DOLPHIN.** A term applied to the pipe and cover at a source for the supply of water.

**DOMAIN.** Landed estate; the land about the mansion house of a lord, and in his occupancy.

**DOM-BOC.** A book of statutes of the ancient Saxon kings.

**DOME.** The upper part of a furnace resembling a hollow hemisphere or small dome.

**DÔME.** A hemispherical roof raised over the middle of an edifice; a cupola; a convex roof or vault covering a circular, elliptical or polygonal plan.

**DOMESTIC ARCHITECTURE.** The art or science of building dwelling houses.

**DOMICAL VAULTING.** That in which a series of small domes are employed, in contradistinction to a waggon-head vault, or an intersecting vault.

**DOMUS.** A term formerly applied to a private house occupied by a single proprietor and family.

**DONCINE.** A moulding concave above and convex below; the French term for the cyma-recta.

**DONJON.** The principal tower in an ancient castle, centrally placed and frequently raised on an artificial foundation.

**DONKEY'S EAR or LUG.** Is a contrivance used by joiners, chiefly for mitreing the ends of stair brackets.

**DOOK.** A Scotch term for wooden bricks or plugs.

**DOOR CASE.** Same as Door Frame.

**DOOR CHAIN.** A chain attached to a door in such a way as only to allow the door being opened a few inches.

**DOOR FRAME.** The wood frame which encloses a door and to which the door is hung; generally applied to frames having a thickness of three inches or more; those thinner are usually called linings.

**DOOR NAIL.** The nail on which the knocker is struck.

**DOOR PLATE.** A metal plate on the door of a house, with the name of the occupant.

**DOOR POST.** The vertical upright of a door frame.

**DOORS.** Are of two different descriptions, the panel or framed door and the batten or ledged door. The latter consists of vertical boards held together by horizontal ledges.

**DOOR SILL.** The sill of a door.

**DOOR STEAD.** Entrance or place of a door.

**DOOR STONE.** A door step or step stone.

**DORIC ORDER.** An order of Greek architecture; the triglyphs form the chief characteristic feature; it is the oldest, the strongest, and the simplest of the three Grecian orders of architecture.

**DORKING LIME.** Is obtained from the beds of the lower chalk at Dorking, in Surrey; slightly hydraulic; makes excellent mortar when mixed with three parts of sand to one of lime.

**DORMANT-TREE, DORMOND or DORMAN.** A large beam lying across a room; a joist or sleeper; the lintel of a door, window, etc.

**DORMER WINDOW.** A vertical window projecting through a sloping roof; so called as belonging originally to a sleeping room; also called lucarne, attic or garret window.

**DORMITORY.** A very large sleeping apartment in schools or colleges; a gallery in convents divided into several cells, where the religious sleep; a burial place.

**DORON.** Among the Greeks, a measure of a handbreadth or palm; the bricks of the Greeks were termed: tetradoron, four hands' breadth, or pentadoron, five hands broad.

**DORON.** Greek term for bricks.

**DORTURE.** A bed-chamber.

**DORSEL or DOSEL.** A curtain or rich canopy of a throne, or screen of ornamental woodwork.

**DOSEL or DORSER.** A hanging of rich drapery behind the dais or chair of state; rich hangings of tapestry, etc., in halls and churches.

**Dot.** In plastering, a small patch of coarse stuff put on a wall or ceiling before applying the second coat; done to form a guide for the end of the floating rule in forming a screed.

**Dot.** A lead dot or dowel is a small plug of lead in stone for securing sheet lead. See Soldered Dot.

**Dots.** Small pieces of plaster set at each angle of the wall to be plastered; the "dots" are plumbed up to obtain a perfect surface by

means of the plaster being worked level with the dots.

**DOTTING ON.** In taking out quantities when one measurement is similar to another, instead of writing it over again a number is written in the tinsing column, indicating the number of times the dimension repeats.

**DOUBLE ACTING.** In mechanics, acting in two directions, as up and down.

**DOUBLE ACTING PUMP.** A pump which lifts and forces water at the same time.


**DOUBLE ARCHES.** The arches which separate the ogives in a Gothic vault.

**DOUBLE-BELLIED BALUSTER.** Is one turned so that both ends are alike.

**DOUBLE CONE MOULDING.** In Norman architecture, a moulding ornamented with the frustums of cones joined at the top and bottom alternately.

**DOUBLE CREASING.** A method of laying ridge tiles in South Wales and the west of England to secure a degree of ventilation. Alternate ridge tiles are made to overlap the two next adjoining.

**DOUBLE CURVATURE.** The curvatures of a curve whereof no part can be brought into a plane, such as the cylindro-cylindric curve, etc.

**DOUBLE DOVETAIL KEYS.** Are pieces of wood of double dovetail shape let in with the grain across a joint, thus, ; used chiefly in circular work.

**DOUBLE ENTRY.** A mode of book-keeping in which every transaction is entered twice, once on the Dr. side of the account that receives, and once on the Cr. side of the account that gives.

**DOUBLE EYE.** A link formed on the end of a king bolt in an iron roof truss.

**DOUBLE-FACED ARCHITRAVE.** One stepped back about the centre, so as to have two plane faces.

**DOUBLE FLEMISH BOND.** Shows on both faces of the wall alternate headers and stretchers in each course.

**DOUBLE FLOOR.** A floor consisting of binders carrying floor joists above and ceiling joists below.

**DOUBLE FRAMED FLOOR.** Is one in which the binders, instead of resting in the walls, are supported on girders.

**DOUBLE HERRING-BONE BOND.** In brickwork, is so called on account of two bricks being worked instead of one. See Herring-bone Bond.

**DOUBLE HUNG SASHES.** Signifies that both the top and bottom sashes of a window are hung with lines and weights.

**DOUBLE JUNCTIONS.** Are pipes made to form the joist where two pipes meet a third, either at the sides or at one end.

**DOUBLE LATH.** In plastering, a lath about three-eighths thick, or double the usual thickness.

**DOUBLE MARGINED DOOR.** A door having a vertical bead down the centre so as to look like a pair of folding doors; it is made in various ways, sometimes framed together in two pieces and secured by means of hard wood wedges.

**DOUBLE MEASURE.** A term formerly applied to a door, etc., moulded both sides.

**DOUBLE OVULO.** Is composed of two ovolo mouldings opposite to one another, as in a sash, bar, etc.

**DOUBLE PLUG.** For lifting large stones; consists of two curved iron plugs with a chain passing through eyes in their heads; they are placed in a dovetailed hole sunk directly over the centre of gravity of the stone.

**DOUBLE QUIRKED BEAD.** A bead having a quirk each side. See Flush Bead.

**DOUBLE REBATED LININGS.** Are door jamb linings having two rebates, one into which the door closes; the one on the opposite edge is only for the sake of appearance.

**DOUBLE REFRACTION.** The refracting of light in two directions.

**DOUBLE RIVETED.** Iron plates joined by two rows of rivets.

**DOUBLE ROLL TILES.** Are like two pantiles joined together, side by side; they have three stubs on the

back by which they are hooked on to the laths.

**DOUBLES.** Are slates either thirteen inches by seven or twelve by eight; they are sold by the thousand or twelve hundred.

**DOUBLE SASHES AND FRAMES.** Consist of two sets of sashes parallel to each other and working in the same frame; used principally in banks and offices to deaden the sound of street traffic.

**DOUBLE SHEAR STEEL.** That in which the "fagoting" operation has been performed twice.

**DOUBLE SHEAR STEEL.** Is produced by repeating the process as for single shear steel.

**DOUBLE SIZE.** Is that which is boiled for a considerable time for the purpose of making it stronger.

**DOUBLE SIZE.** A trade term for size of extra strength.

**DOUBLE SKIRTING.** Consists of two skirtings one above the other, the upper one being slightly kept back; the bottom one or "base plate" has generally a plain face and is connected to the upper one by means of a tongue and groove.

**DOUBLE TENON.** Two tenons on the same end of a piece of stuff.

**DOUBLE TORUS.** Is composed of two semi-cylindrical projections, the upper one being smaller than the other and surmounted by a fillet.

**DOUBLE TRACERY.** Two layers of tracery, one behind the other, and with a clear space between.

**DOUBLE VAULTS.** Two vaults of brick or stone carried up separately with a cavity between them.

**DOUBLING.** A Scotch term to denote eaves boards, or a tilting fillet.

**DOUBLING COURSE.** Same as Eaves Course.

**DOVETAIL.** The term applied to any projection which is wider at the end than at the base.

**DOVETAIL BONDING.** In masonry, is chiefly used in constructions intended to resist the force of the waves of the sea; the stones are held in position by being dovetailed one

into the other; used chiefly in light-houses.

**DOVETAILED KEY.** Is a key used to connect boards together when it is advisable to allow them to shrink; its section is thus a double dovetailed key; also used for connecting joints.

**DOVETAIL JOINT.** Is used for connecting the sides of drawers, boxes, etc.; it consists of a series of triangular-shaped pins with corresponding sockets or tails to fit them.

**DOVETAIL MOULDING or TRIANGULAR FRET.** Is an ornament formed of running bands.

**DOVETAIL SAW.** Is a very small tenon saw with about fifteen teeth to the inch; used by joiners for cutting dovetails and other light work.

**DOVETAIL SLIP FEATHER.** Is a tongue in the form of a double dovetail. See Slip Feather.

**DOWEL JOGGLES.** Are hard pieces of stone cut to the required size and fitted into corresponding mortises in the two stones to be joined together.

**DOWEL JOINT.** A joint held by dowels.

**DOWELLING.** A method of joining two pieces of timber together by dowels.

**DOWEL PIN.** A dowel.

**DOWELS.** Are pins of wood used to connect joints of boards, etc.

**DOWELS.** In masonry, are short thick pins of copper or iron used to connect joints.

**DOWEL SCREW.** Is a screw having no head but with a thread on both ends with a smooth portion left in the middle; used by joiners.

**DOWN COMER, DOWN PIPE.** A rain-water pipe. (Scotch terms.)

**DOWN-DRAUGHT.** A draught of air downward, as down a chimney.

**DOWN PIPE, DOWN COMER, DOWNSPOUT.** Are terms applied to a rain-water pipe.

**"DOWN THE STEEP."** In the line of greatest fall; the usual way of laying "minor" drains.



**DOWNTHROW.** A local sinking in the strata of the earth; the distance to which it has sunk.

**DOWSING.** A pretended mode of discovering a mineral lode by the divining rod.

**DOZENS.** Pieces of wallpaper border containing twelve yards.

**DRAFT.** A drawing of lines for a plan; outline; sketch.

**DRAFT or DRAUGHT.** In carpentry, a saw cut.

**DRAFT or DRAUGHT.** A mason in squaring up a rough stone is said to cut "drafts" when he forms narrow plane surfaces along the edges of the stone, on which he puts two parallel straight edges to take the stone "out of winding".

**DRAFTED MARGIN.** Is a smooth surface an inch or more in breadth round the margins of squared stones; these margins are called "drafted margins".

**DRAFTED STONES.** Are those in which the face is surrounded by a chisel draft, *i.e.*, a drafted margin, the space inside the draft being left rough.

**DRAFT ENGINE.** An engine used for pumping.

**DRAG or LARRY.** A rake used for mixing the lime, sand and hair in preparing coarse stuff.

**DRAG.** A term sometimes applied to a spandrel for stairs.

**DRAG or DROP.** A door, *etc.*, is said to drag when its hinges become loosened and causes the lower edge of the door to rub or "drag" along the floor; anything bearing down or rubbing on another.

**DRAGGED.** The finish given to plane limestone ashlar by means of a tool toothed like a saw, which is drawn backwards and forwards across the face of the stone.

**DRAGGING.** The operation of finishing the surface of soft stone by means of a drag.

**DRAGON BEAM, DRAGON TIE or DRAGGING TIE.** Is a framework at the lower end of a hip rafter connecting it with the wall plates in such a way as to resist the thrust of the hip rafter.

**DRAGON'S BLOOD.** Is a resinous

substance imported from various places, in dark brown lumps, bright red powder, or in other forms; chiefly used for colouring lacquers or varnishes.

**DRAGS.** Used by masons, are made from best steel saw plate, with coarse, middling and fine teeth, called coarse, seconds and fine drags; they are used for traversing the face of the stone to remove saw and chisel marks, and finishing to the smoothness required.

**DRAIN.** A subterranean or other channel for carrying off sewage, *etc.*

**DRAINAGE.** The system of sewage; that which is carried off by drains; the surface drained.

**DRAINAGE SYSTEM.** In agricultural drainage, the whole collected arrangement of "mains," "sub-mains" and "minors," whether serving one field only or a whole district.

**DRAINER or DRAINING BOARD.** A utensil or board provided with channels, on which articles are placed to drain after being washed.

**DRAINING ENGINE.** An engine for pumping up water from where it is too low to be drained off.

**DRAINING PLOUGH.** A plough for cutting drains.

**DRAINING TILES.** Are tiles employed in draining fields.

**DRAIN TRAPS.** Are contrivances for preventing the escape of foul air from drains while admitting the water into them.

**DRANA.** A drain or watercourse.

**DRAPERY.** In sculpture, the representation of the clothing or dress of human figures, *etc.*

**DRAUGHT.** The representation of a building on paper, explanatory of the various parts of the interior and exterior by means of plans, elevations, *etc.*, drawn to a scale.

**DRAUGHT COMPASSES.** Are those with movable points; used for drawing the finer lines in mechanical plans, *etc.*

**DRAUGHTSMAN.** A man who draws designs or plans.

**DRAUTE CHAMBER.** A retiring or withdrawing room.

**DRAW.** That part of a bridge which is either raised or drawn aside.

**DRAW AWAY, DRAW DOWN.** Reducing a thick bar of iron to any required diameter.

**DRAWBACK or FALSE CORE.** In foundry work a part of the pattern which has to be made separately and removed sideways.

**DRAW-BACK LOCK.** A lock in which the bolt can be drawn back by a handle on the inside, and only unlocked by a key from the outside.

**DRAW-BORE PINS.** Are pieces of steel in the shape of the frustum of a cone, slightly tapered; used for driving through the draw-bores of a mortise and tenon, in order to bring the shoulder close home; also called "draw pin".

**DRAW-BORING.** A method of drawing a tenon tight into the mortise by making the hole in the tenon slightly nearer the shoulder than the corresponding hole in the cheeks of the mortise.

**DRAWBRIDGE.** A bridge which may be either raised up, let down, or drawn aside at pleasure.

**DRAWING.** A representation of objects on a plain surface by means of lines and shades.

**DRAWING.** In thatching, straightening out the straw to lie in one direction.

**DRAWING KNIFE.** A knife with a long handle used for cutting sheet lead.

**DRAWING KNIFE.** A blade of steel with a handle at right angles to it at each end; used by carpenters, who draw it towards them in use.

**DRAWING PAPER.** A stout paper of various thicknesses, for drawing on.

**DRAWING-ROOM.** A withdrawing room, or room for the reception of company.

**DRAWN.** The joints in brickwork raked out to form a key for plaster.

**DRAW PLATE.** A steel plate having a graduated series of conical holes through which wires are drawn in order to be reduced and elongated.

**DRAW WELL.** A deep well, from

which water is drawn by a long rope with a bucket attached.

**DREDGING MACHINE.** A machine used to dredge up mud or gravel from the bottom of harbours, canals, etc.

**DRESS.** In plumbing, to "dress" lead is to beat it into the required form.

**DRESS.** Dressing stone, is working it to the size and shape required and finishing the faces as required. Dressing lead, is beating it into the shape required.

**DRESSED.** Ores are said to be "dressed" when they are broken up and separated from earthy matters and impurities.

**DRESSED.** In timber, wrought; in stone, hammer dressed.

**DRESSED BRICKS.** Are those which after being moulded are beaten with a dresser, which is similar in shape to a small cricket bat, which is sometimes tipped with iron.

**DRESSER.** Is a sort of wood mallet used by plumbers for dressing lead to the required shape; also called a "bat".

**DRESSER.** A combination of drawers, cupboards and shelves; a table placed against a wall in a kitchen, with drawers, and having shelves over it.

**DRESSING-ROOM.** A small room generally adjoining to and communicating with a bedroom.

**DRESSINGS.** All kind of mouldings projecting from the naked wall or ceiling; the hewn stone to doors, windows, etc.

**DRESSING STONE.** Implies putting any particular description of work or finish upon its surface.

**DRIER.** Any substance added to paint to make it dry quickly.

**DRIERS.** Are substances (such as litharge, red lead, sulphate of zinc, acetate of lead, etc.) mixed with paint in order to cause the oil to thicken and solidify more rapidly.

**DRIFT.** A tool similar to a cold chisel but blunt at the point.

**DRIFT.** The horizontal force which an arch exerts, tending to overset the piers from which it springs.

**DRIFT.** In mining, a passage cut between shaft and shaft; a passage within the earth; also called "drift-way".

**DRIFT BOLTS.** Are bolts used for driving out other bolts; usually made of steel.

**DRIFT OUT.** To enlarge a hole by means of a taper pin.

**DRIFT WAY.** A horizontal tunnel connecting two shafts.

**DRILL.** A tool for cutting a circular hole in metal or other hard substances.

**DRILL.** To bore a circular hole in metal or stone. In gardening, a row of planted seeds or a small trench or furrow made to receive them.

**DRILL BOW.** A small bow whose string is used for the purpose of rapidly turning a drill.

**DRILLING MACHINE.** A machine for cutting circular holes in metal by means of a revolving drill; also called a "drill press".

**DRIP.** A step about two inches high, formed across the width of a gutter, when more than twelve feet long; also formed at the end of every sheet of lead or zinc in a flat.

**DRIP.** The projecting edge of a moulding channelled or throated beneath so that the rain will drip from it.

**DRIP BOARD.** A board under a plate rack for receiving the drip from the plates.

**DRIP BOX.** A Scotch term for a cesspool in a lead flat or gutter.

**DRIPPING EAVES.** The lower edges of the roof of a building from which the rain drops.

**DRIPSTONE, HOODMOULD, LABEL, WEATHER MOULDING or WATER-TABLE.** Is a projecting tablet or moulding over the heads of doorways, windows, etc., to throw off the rain.

**DRIVER.** In mechanics, that which communicates motion to something else, as a wheel.

**DRIVING-BAND or BELT.** The strap, belt or gearing for uniting, turning and carrying machinery.

**DRIVING SHAFT.** A shaft which communicates motion from the driving wheel.

**DRIVING WHEEL.** The wheel which communicates motion to the rest.

**DROP or PENDENT.** In stair-casing, is when a newel extends downwards beyond the string and ceiling; the end is ornamental turned; sometimes this drop or pendent is turned separately and dowelled into the end after the newel is fixed.

**DROP.** The frusta of cones representing drops or little bells under the triglyphs in the Doric order of architecture, also in the under part of the mutuli or modillions of the order.

**DROP.** A Scotch term for a noggle for an eaves gutter.

**DROP ARCH.** A pointed arch in which the radii are less than the span.

**DROP ESCUTCHEON.** Is one having a pivoted flap for covering the keyhole.

**DROP HANDLE.** A door or drawer handle with a joint so that it hangs down when not in use.

**DROP LAKE.** Is a pigment made by dropping a mixture of Brazil wood through a funnel on to a slab; these drops are dried and mixed into paste with gum water.

**DROP MOULDING.** Is that planted in a panel and standing below the surface of the surrounding framing.

**DROPPER.** A short vertical bar used between the standards of a wire fence to stiffen the lower wires.

**DROP RING.** A ring which falls down when not in use, such as for a trap-door, etc.

**DROP STONE.** Spar in the shape of drops.

**DROSS.** The scum or extraneous matter of metals thrown off in the process of melting.

**DROVED.** A method in masonry in which the tool marks run in parallel bands across the face of the stone but not in continuous lines.

**DROVED AND BROACHED.** A Scotch term applied to stone that has been roughed and then tooled clean.

**DROVED AND STRIPED.** Stones first droved and then striped; the strips consist of shallow grooves

done with a half or three-quarter inch chisel, about an eighth of an inch deep, having the droved interstices prominent.

**DROVED ASHLAR.** Chiselled or random tooled ashlar.

**DROWN.** A Scotch term applied to the seal of a trap.

**DRUM.** A short revolving cylinder; generally for the purpose of turning several small wheels by means of straps passing round it.

**DRUM.** A large revolving cylinder used for turning square balusters.

**DRUM.** The upright part under or above a cupola; the solid part or vase of the Corinthian and Composite capitals; also applied to a cylinder used by joiners for bending wood.

**DRUM CURB.** A hollow cylinder of metal or timber on which the lining of a well is sometimes built, the lower outer rim being provided with a cutting edge and the earth being excavated beneath the drum, curb and lining sink by their own weight.

**DRUMMOND LIGHT.** A very intense light produced by throwing a stream of oxygen gas and a stream of hydrogen gas or coal gas, brought into union in an ignited state, upon a ball of lime; invented by Captain Drummond.

**DRUSE.** A cavity in a rock, having its interior surface studded with crystals or filled with water.

**DRUXY or DRUXEY.** Timber having decaying spots of a whitish colour in it.

**DRY.** In sculpture, sharply or frigidly precise in execution, or wanting a delicate contour in form.

**DRY AREA.** An area round the external wall of a building, the bottom of which is below the floor line; also called "air drain".

**DRY DOCKS.** Docks for building and repairing vessels.

**DRY FLOATED DEALS.** Are those that have been stacked and dried before being floated down the river.

**DRYING OIL.** An oil that hardens on exposure to the air in a thin

film; it may consist of boiling one and a half pounds of red lead in a gallon of raw linseed oil, and allowing it to settle.

**DRY MARKED.** Russian timber is "dry marked" or hammer branded.

**DRY PUDDLING.** Is the process of obtaining wrought iron by burning the carbon out of refined cast iron in a reverberatory furnace.

**DRY ROT.** Is promoted by insufficient seasoning, or use in a moist, warm, confined atmosphere; want of ventilation is the most frequent cause; in its first stage of rottenness, swells and changes colour, and is often covered with fungus or mouldiness or mildew, and emits a musty smell; the colour of the fungus varies from white, greyish-white with violet, yellowish-brown or a deep shade of a fine rich brown.

**DRY RUBBLE WALLING.** Consists of stones roughly hammered, and bedded by pinning with spalls, without any mortar; chiefly used for fencing land, railway and canal embankments and cuttings.

**DRYS.** Are seams in stone containing material not thoroughly cemented together.

**DRY STAMPED or HARD BRANDS.** Applies to deals marked at their ends with the blow of a branding hammer.

**DRY STEINING.** Consists of laying the bricks round a well without mortar, but generally a course of bricks is laid at intervals in cement to strengthen the rest of the work.

**DRY STONE.** Built of stone without lime.

**DRY STOVE.** A glazed structure for preserving the plants of dry and hot climates.

**DUB.** To work with the adze.

**DUBBED or DAUBED.** Scotch term for punched or pointed.

**DUBBING.** Filling out with brick or tile to avoid extra thickness of cement or plaster.

**DUBBING OUT.** In plastering, a method of roughly forming a cornice, etc., in plaster, before putting on the finishing coat.

**DUCHESSES.** Are slates twenty-four inches by twelve; they are sold by the thousand of twelve hundred.

**DUCTILIMETER.** An instrument for comparing the ductility of metals.

**DUCTILITY.** Is the property of being permanently drawn out or elongated in a tensile stress higher than the elastic limit; the change of form is permanent and remains when the force is removed; therefore the converse of elasticity.

**DULCIFIED SPIRIT.** A compound of alcohol with mineral acids.

**DUMB SCREW.** A Scotch term for a lifting jack worked with a rack and pinion.

**DUMB WAITER.** A framework with shelves placed, or made to act, between a kitchen and dining-room, for conveying food, etc.; a sideboard with revolving shelves.

**DUMB WELL.** A dry well into which storm water is directed, with the idea of raising the saturation level of the stratum and thus improving the yield of springs.

**DUMMY.** Is a small mallet made of lead or zinc about three or four pounds in weight; used for striking the soft stone tools.

**DUMMY.** A plumber's tool consisting of an iron rod with a knob at the end; used for getting the dents out of lead soil pipe bends, etc.

**DUMPS.** Lumps of clay for making bricks; a "dump" is sufficient to mould one brick.

**DUMS.** In Cornwall, frames of wood like the jambs of a door or the frame of a window; used to support loose ground, etc.

**DUN.** Among the ancient Britons, a circular tower, or small fortress, erected on the summit of a hill.

**DUNE.** A low hill of sand on the coast of England and other countries.

**DUNGEON.** A close dark place of confinement, usually underground; formerly the principal tower or keep of a castle.

**DUNNAGE BOARDS.** Those which have been used on board ship for stowage, etc.

**DUODECIMALS.** A rule in arithmetic in which the denominators rise by twelves; chiefly applied to the calculation of square feet and inches.

**DUODENARY.** Increasing twelvefold; said of arithmetic in which each figure increases twelvefold from right to left.

**DUPLICATION OR DOUBLING OF THE CUBE.** A celebrated problem to find out the side of a cube whose contents should be twice that of a given cube.

**DURABILITY.** Is the power of stone, paint, etc., resisting atmospheric and other chemical influences.

**DURAMEN, HEARTWOOD OR SPINE.** Is the inner layers of wood in the stem of an exogenous tree, which are filled up and hardened as the tree increases in age.

**DURBAR.** A Persian term applied to a court or building where the sovereign or viceroy gives audience.

**DURESCO.** Is a preparation of Charlton white worked up by a process which is a secret; it is washable, non-poisonous, more easily applied and less expensive than oil paints; dries out perfectly "flatt"; is quite solid; used for internal wall decoration.

**DURMAST OAK** (*Quercus pubescens*). Is a British oak of inferior quality.

**DUROLINE.** Is composed of steel wire gauze thickly covered with a varnish or similar material; being translucent it can be used as a substitute for glass.

**DUST BRICKS.** Are blue in colour with a glossy surface; they are much used for paving, being very hard; in making them, coal dust is used instead of sand.

**DUSTING BRUSH.** A brush used by painters for taking dust off their work before painting; also called "duster".

**DUTCH ARCH.** Another term for a French arch.

**DUTCH BOND.** In brickwork, is similar to English bond, except at the quoins where the closers are omitted in the heading course, and a three-quarter bat is laid in the stretching course.

**DUTCH CLINKERS.** Are buff bricks, only used for paving; they are generally bright buff in colour, but the addition of oxide of iron will turn them black; they are smaller than ordinary bricks and occasionally warped in burning; very hard and vitrified throughout; they measure about six inches by three, by an inch and a half thick; long narrow bricks imported from Holland.

**DUTCH ELM** (*Ulmus major*). Produces an inferior timber.

**DUTCH GOLD, METAL or FOIL.** Is an alloy of copper and bronze or zinc, beaten into a thin foil of a golden colour.

**DUTCH PINK.** Is a similar pigment to rose pink but is made from quercitron bark, or from the plant *Reseda luteola*; it is of a bright yellow colour; used in distemper, etc.

**DUTCH TILES.** Ornamental tiles glazed and painted.

**DUTCH WHITE.** Is a mixture of white lead and sulphate of barium; also called Holland white.

**DWANGS.** A Scotch term to denote the short pieces of timber employed in strutting floor joists.

**DWARF CUPBOARD.** A low cupboard, the doors being not more than three feet high.

**DWARF WALL.** A low wall, or walls of less height than the storey of a building.

**DWARF WAINSCOTTING.** That which does not reach the whole

height of a room, being usually three, four, five or six feet high.

**DWELLING HOUSE.** The house built for the habitation of man as distinct from a place of business.

**DYKE.** In coal mining, the banks of whin or basalt by which the coal strata are frequently divided.

**DYKE.** In Scotland, a rubble wall built without mortar; used as boundary walls.

**DYNAMICS.** That department of mechanics which treats of the action of force, both as producing motion and producing rest.

**DYNAMO.** A machine whereby mechanical work is transformed into powerful electric currents by the inductive action of magnets or coils of copper wire in rapid motion.

**DYNAMO.** A continuous current; dynamo is a contrivance for the production of electricity by means of mechanical energy. The current it produces *never* reverses, and is capable of performing electrolysis. An alternator differs from the continuous current machine by the fact that its current reverses its direction so many times each revolution (according to design), in practice, generally from 50 to 200 times a second. Alternating current is incapable of performing electrolysis.

**DYNAMOMETER.** An instrument used for ascertaining the amount of useful effect given out by any motive power.

**DYSODILE.** A species of greenish-grey or yellowish coal which burns with a fetid odour.

## E.

**E.** As a numeral, E stands for two hundred and fifty.

**EAGLE.** A Greek term for the frontispiece or pediment of temples.

**EAGLE STONE.** A variety of argillaceous iron ore in the form of nodules, which often contain loose kernels that rattle within.

**EAGLE WOOD.** A fragrant wood used by the Asiatics for burning as incense.

**EAR.** The projection cast on a rain-water pipe by which it is fixed to the walls; they are sometimes cast separate (also see Crosettes); called "lugs" in Scotland.

**EARLY ENGLISH ARCHITECTURE.** Was the first style of Gothic architecture used in England; it succeeded the Norman from 1189 to 1272; it is characterised by narrow pointed windows, lancet shaped, and clustered pillars.

**EARTH CLOSET.** A convenience for the use of the occupants of a house in place of a water-closet.

**EARTH FALL.** A portion of the earth's surface, elevated by some subterraneous force, then cleft asunder and suddenly depressed, when the space becomes occupied with water.

**EARTH FLAX.** An asbestos resembling flax.

**EARTH HOUSE.** An underground structure built of unhewn stones, roofed with flags, and accessible from the roof by a narrow doorway; presumed to have been constructed as a place of safe retreat in winter and during war.

**EARTHING.** A conductor is often "earthed" for certain reasons. It is done by connection of one or more parts of it (generally one or both ends) to a metal plate sunk in the earth.

**EARTH PLATE.** A plate attached to an electric battery and buried in the earth so as to produce a current.

**EARTH TABLE, GROUND TABLE or GRASS TABLE.** The plinth or lowest course of stone seen in a building, immediately above, and level with the earth.

**EARTHWORK.** In engineering, a cutting, embankment, etc., of earth.

**EARTHY FRACTURE.** In mineralogy, when the fracture of a mineral is rough.

**EASEMENT.** Any privilege or convenience legally enjoyed, as of right of way, light and air, etc.

**EASING.** The gradual removing of wedges under a dead shore or arch centre to allow new work to take its bearing before supports are finally removed.

**EASINGS.** In staircasing, is a term applied to the concave curves in the strings of stairs.

**EASTER or HOLY SEPULCHRE.** A recess for the reception of the holy elements consecrated on the *Cena Domini* or Maundy Thursday, till high mass on Easter day.

**EAVES.** The lower edge of a sloping roof of a building, which overhangs the face of a wall, and casts off the water that falls on the roof.

**EAVES BOARD, EAVES LATH, EAVES CATCH, EAVES POLE, EAVES COURSE.** Are terms applied to a "tilting fillet," which see.

**EAVES COURSE.** In masonry or brickwork, a projecting course immediately under the eaves.

**EAVES COURSE.** In slating, the bottom course of slates along the eaves of a roof.

**EAVES GUTTER.** A gutter along the eaves of a building.

**EAVES POLE.** A Scotch term for a tilting fillet.

**EBONY.** Is imported principally from the East; it is of several colours, as yellow, red, green, black; it is a hard, heavy and durable wood, susceptible of a fine polish; the most highly prized is that of a black colour.

**EBORARIUS.** A term applied by the Romans to a kind of ivory work.

**EBOULEMENT.** In fortifications, the crumbling or falling of a wall.

**ECCENTRIC.** A circle not having the same centre as another.

**ECCENTRIC.** Literally "out of centre"; a contrivance by which a reciprocating motion is conveyed from a regularly revolving shaft.

**ECCENTRIC GEAR.** The links, connecting rods, straps and wheels by which an eccentric motion is carried on through the machinery.

**ECCENTRICITY.** The state of having a centre different from that of another circle; deviation from a centre.

**ECCENTRICITY OF AN ELLIPSE.** Is the distance from the centre to each of the two foci.

**ECCENTRIC ROD.** The rod transmitting the motion of an eccentric wheel.

**ECCENTRIC STRAP.** The iron band grasping the circumference of an eccentric wheel within which it revolves.

**ECCENTRIC WHEEL.** A wheel the axis of whose revolution is not in the centre.

**ECCLESIOLOGY.** The science of church building and decoration, or of ecclesiastical antiquities.

**ECHANDOIRS.** A French term applied to the scalding and cutting up rooms in abattoirs.

**ECHEA.** Hollow vessels of metal or earthenware in the form of a bell; used by the ancients in the construction of theatres for the purpose of reverberating the sound of the voices.

**ECHINITE.** The fossil echinus or sea-urchin found in chalk pits.

**ECHINUS.** A large convex moulding generally of elliptical or eccentric contour.

**ECHINUS.** In architecture, an ovolo moulding enriched with the "egg and tongue" or "egg and anchor" ornament; it is used in the cornices of the Roman orders of architecture, also in the Ionic capitals but in a bolder form; so called from its resemblance to the echinus or large vase, in which drinking cups were washed by the ancients.

**ECHO.** A vault or arch for redoubling sounds.

**ECHOMETRY.** The art of constructing vaults to produce echoes; the art or act of measuring the duration of sounds.

**ECOUTES.** In fortifications, small galleries made at equal distances in front of the glacis, with a view to ascertain the operations of the enemy's miners.

**ECPHORA.** A term applied by Vitruvius to the projection of a member or mouldings of a column, *i.e.*, the distance it projects from the naked column or from its axis; the projection of any member or moulding before the face of the member or moulding next below it.

**ECTYPE.** A copy; a cast or object in relief or embossed.

**ECURIE.** A stable; a covered place for horses.

**EDDER.** Such flexible wood as is worked into the tops of hedge stakes to bind them together.

**EDELITE.** A mineral of silica, alumina and lime.

**EDGE.** Applied to a board or stone generally implies the narrow or thin side; the border of any thing; the margin.

**EDGE.** To "edge" is to bring a number of timbers, such as rafters, etc., into the same plane.

**EDGE HINGE.** A term in Scotland applied to a butt hinge.

**EDGE HINGE.** Another term for a butt hinge.

**EDGE NAILING.** Secret nailing.

**EDGE RAIL.** The iron rail of a railway, laid on its edge instead of flat, as in tram roads.

**EDGE RAILWAY.** A railway in which the wheels run on edge rails.

**EDGE TOOLS.** An instrument having a sharp edge; those which chip or shave in the operation of working.

**EDGING OR RANGING.** The reducing of the edges of ribs or rafters, whether externally or internally, so as to range in a plane or in any curved surface required.

**EDIFICE.** A term generally applied to architectural erections distinguished for grandeur, dignity and importance.

**EDILE.** A Roman magistrate whose chief business was to superintend buildings of all kinds, more especially public edifices, temples, bridges, aqueducts, etc.

**EDUCATION PIPE.** The pipe from the exhaust passage of the cylinder to the condenser.

**EFFECTION.** In geometry, the construction of a proposition; a problem drawn from some general proposition.

**EFFLORESCENCE.** A white substance that sometimes makes its appearance on walls. It consists of fine crystals of varying chemical composition.

**EFFLUENT.** The purified liquid sewage as permitted to run away to the river.

**EGERAN.** A sub-species of pyramidal garnet found near Eger, in Bohemia.

**EGG.** In architecture, an ornament of that form cut in the echinus or quarter round.

**EGG MOULDINGS.** Those in which the egg is introduced; generally combined with another form, such as the "egg and tongue," "egg and anchor," "egg and dart"; the egg is introduced alternately.

**EGYPTIAN.** A large-sized paper chiefly used for drawing purposes.

**EGYPTIAN ARCHITECTURE.** Is of a massive sombre character, with vast aisled halls without windows, and with close files of gigantic columns and colossal statues; it had its origin 2,222 years before Christ and advanced and flourished under different dynasties.

**EGYPTIAN BLUE.** Is a bright coloured pigment produced by the hydrated protoxide of copper mixed with a small quantity of iron.

**EGYPTIAN BROWN.** Is a pigment produced from a bituminous earth.

**EGYPTIAN LOTUS, EGYPTIAN RALE and NYMPHEA LOTUS.** Are plants found in Egypt; they are introduced into decoration.

**EGYPTOLOGY.** The science of Egyptian antiquities, such as monuments and their inscriptions.

**E. H. B.** On lead pencils, denotes extra hard and black.

**EIDOGRAPH.** An instrument for copying plans or drawings, reduced or enlarged.

**EIGHTPENNY NAILS.** Generally means nails about two and a quarter inches long.

**EKE.** In Scotland, a piece of stuff used to make up anything to the required size.

**ELÆOTHESIUM.** An apartment in the baths used by the ancients, where, after leaving the bath, the bathers anointed themselves.

**ELASTIC.** Springy; having the power to return to the form from which it was distorted.

**ELASTIC CURVE.** The figure assumed by an elastic body having one end fixed horizontally in a vertical plane and the other loaded with a weight, which, by its gravity, tends to bend it.

**ELASTICITY.** Is the property, which all bodies more or less possess, of returning to their original shape after being distorted by any kind of stress; the resistance which a body opposes to a change of form.

**ELASTICITY.** The property which fluids possess of returning to their original bulk after being compressed.

**ELASTIC LIMIT.** Is that point in the straining or bending of material up to which it will recover its original shape upon the removal of the strain.

**ELATERITE.** An elastic mineral pitch.

**ELATROMETER.** An instrument for measuring the degree of rarefaction of the air in the receiver of an air pump.

**ELBOW.** In joinery, one of the upright sides which flank any panelled work.

**ELBOW.** In architecture, an obtuse angle of a wall, building or road.

**ELBOW or THROATED BEND.** In plumbing, is when the pipes are made at right angles to each other or as required.

**ELBOW LAVATORY.** That fixed against a wall away from any angle, etc.

**ELBOW LININGS.** Are those covering the splays of the walls in windows when there are no shutters.

**ELBOWS.** The narrow framing on the top of a water-closet seat is termed the back and elbows; the projections on the side of church stalls.

**ELBOW SOCKET.** An L shaped socket which is screwed to the end of a gas bracket or pendent and in which the burner is fixed.

**ELDER.** A small tree with a spongy pith, which is used when dried for electrical purposes; the wood is also used for rules, etc.

**ELECTREPETER.** An instrument for changing the direction of electrical currents.

**ELECTRIC.** Any body capable of exhibiting electricity and of preventing the passage of it from one body to another.

**ELECTRIC AURA.** A current of electrified air, employed as a mild stimulant in electrifying sensitive parts.

**ELECTRIC BATTERY.** A number of electric jars united so as to give a powerful discharge.

**ELECTRIC CIRCUIT, ELECTRIC CURRENT.** The transmission of electricity from a body overcharged

to one that is undercharged through the agency of metallic wires or conductors.

**ELECTRIC CLOCK.** A clock either moved or controlled by electricity.

**ELECTRIC COLUMN.** A sort of electric pile composed of thin plates of different metals, with paper interposed between them.

**ELECTRIC FLUID.** The supposed matter of electricity.

**ELECTRIC JAR.** A jar so constructed as to be able to be charged with electricity.

**ELECTRIC LIGHT.** A brilliant white light due to the intense heat in a solid body caused by the passage of an electric current through it.

**ELECTRIC MACHINE.** An apparatus for producing electricity.

**ELECTRIC TELEGRAPH.** An apparatus for transmitting messages and intelligence by means of electro-magnetism over wires, either for long or short distances.

**ELECTRICIAN.** One versed in the science of electricity.

**ELECTRICITY.** The subtle agent called the electric fluid; usually excited by friction; the science of the phenomena and laws of the electric fluid.

**ELECTRIC WIRE.** The popular name for the wires of the magnetic telegraph.

**ELECTRISERS.** Plates of copper or silver and zinc, prepared for medical purposes.

**ELECTROLIER.** A bracket or pendent carrying electric lamps for domestic lighting.

**ELECTROLOGY.** The science of electricity.

**ELECTROLYSIS.** The act of decomposing a compound substance by the action of electricity or galvanism.

**ELECTROLYSIS.** The electro-chemical decomposition of various compounds. The compound is split up into atoms termed ions. The ions which seek the anode or + electrode are called anions, while those seeking the kathode or electrode are kathions.

**ELECTROLYTE.** A compound

which may be directly decomposed by an electric current.

**ELECTRO-MAGNET.** A soft iron bar rendered magnetic by passing an electric current through wire coiled round it.

**ELECTRO-MAGNET.** See Magnet.

**ELECTRO-METALLURGY.** The art of depositing metals held in solution, as silver, gold, etc., on prepared surfaces, through the agency of voltaic electricity or galvanism.

**ELECTROMETER.** An instrument for measuring the quantity or intensity of electricity, or for indicating the presence of it.

**ELECTRO-MOTION.** The motion of electricity or galvanism, or the passing of it from one metal to another; motion electrically produced.

**ELECTRO-MOTIVE FORCE, E.M.F.** See Voltage.

**ELECTROMOTOR.** A machine in which the motive power is derived from electric currents by means of electro-magnets or dynamos.

**ELECTROSCOPE.** An instrument to test the presence, nature and intensity of the electric force.

**ELECTRUM.** An alloy of gold with a fifth part of silver; a variety of gold ore of a pale brass colour.

**ELEVATION.** The upright plan of a building or any part of a building. Elevations are of two kinds, *viz.*, geometrical and perspective. In the former the whole is projected upon the same plane, the latter partakes of parallel perspective and the parts beyond the first plane are shown diminished by distance and also come into view although they may be behind others on the first plane, which, in a geometrical representation, would be concealed. The elevation is described as front, back or side according to the view taken.

**ELEVATOR.** A lift; a series of small boxes fastened by a strap, and moved by a wheel to raise grain, etc., from a lower to a higher floor.

**ELGIN MARBLES.** Ancient sculptured marbles originally belonging to the temple of Minerva at Athens, and so named from the Earl of Elgin who removed them to England in 1812.

**ELIZABETHAN ARCHITECTURE.** The style which prevailed in England at the time of Queen Elizabeth, and immediately subsequent to the Tudor style of Henry VIII.

**ELK WOOD.** The soft spongy wood of the umbrella tree.

**ELLIPSE.** One of the conic sections produced by obliquely cutting a cone entirely through the curved surface.

**ELLIPSOGRAPH.** An instrument for describing an ellipsis by continued motion.

**ELLIPSOID.** A solid figure, like the earth, of which all the plane sections are ellipses or circles; a solid figure formed by the revolution of an ellipse about its axis.

**ELLIPTIC or ELLIPTICAL.** Having the form of an ellipse; having a part omitted.

**ELLIPTIC ARCH.** A portion of the curve of an ellipse employed as an arch; an arch shaped in the form of a semi-ellipse.

**ELLIPTIC COMPASSES.** A term applied to any instrument used for describing an ellipse.

**ELLIPTIC GOTHIC.** Or the four-centred Gothic arch, is described or struck from four centres, and consists of four arcs, two large and two smaller ones which are struck with radii of different lengths.

**ELLIPTIC GRATE.** A firegrate without a back, but with hobs only.

**ELLIPTIC WINDING STAIRS.** Are such as are cased in and wind round an elliptic newel.

**ELLIPTOGRAPH.** Same as Ellipso-graph.

**ELM** (*Ulmus*). Is chiefly found in England and America and many parts of Europe. The American variety is of a different class of wood to the English, being straight grained and no knots. Elm is chiefly used for coffins, pulley blocks, carts, stable fittings, etc.; it has a reddish-brown colour, with light sap-wood. The grain of English elm is very irregular, knotty, warps and twists freely; if constantly immersed in water it is very durable.

**ELONGATION.** The act of lengthening.

**ELVAN.** Is a stone chiefly used in Cornwall (where it is found) for building, it being very durable and fine grained; said to be a bastard limestone.

**ELVANS.** Veins or dikes of a crystalline mixture of felspar and quartz; found in granite rocks and fossiliferous slates in Cornwall and Devon.

**EMBANKMENT.** A mound or bank raised for any purpose, as for forming a level line of railway.

**EMBATTLED.** A wall indented with notches in the form of embrasures on the top of a wall, parapet or other building.

**EMBATTLED ARONADE.** See Aronade.

**EMBATTLED-BATTLED LINE.** A straight line bent into right angles so that if there be three sets of parts one set may be parallel to those of the other two.

**EMBATTLED BUILDINGS.** Those with embrasures in the parapets.

**EMBLEM.** Inlaid or mosaic work.

**EMBLEMATA.** Figures executed in the precious metals or amber, with which the ancients used to decorate their vessels of gold, silver, etc., and which could be fixed on or taken off at pleasure.

**EMBOLUS.** In mechanics, a wedge.

**EMBOLUS.** Something inserted or acting in another, as the movable part of a pump or syringe; named also the piston or sucker.

**EMBOSSED GLASS.** That having a design etched on it by means of hydrofluoric acid.

**EMBOSSING or EMBOSSED WORK.** The raising or forming in relieve any sort of figure, whether performed with the chisel or otherwise; when the figures rise (and are more or less prominent) from the plane on which they are formed they are said to be in alto-, mezzo- or basso-relievo.

**EMBRASURE.** The crenelle or interval between the merlons of a battlement; the inward slanting enlargement of a door or window.

**EMERALD COPPER.** A beautiful emerald green crystallised mineral.

**EMERALD GREEN.** Is a pigment made of verdigris mixed with a solution of arsenious acid; of a very brilliant colour, very poisonous, difficult to grind and dries badly in oil.

**EMERY.** A variety of corundum distinguished for its extreme hardness and usually occurring in masses of a black or bluish-grey colour.

**EMERY CLOTH.** Consists of ground emery of different degrees of fineness attached to calico by means of glue; made in sheets about the same size as ordinary glass paper.

**EMERY POWDER.** This powder is known by eight different names: corn emery, coarse grinding emery, grinding emery, fine grinding emery, superfine emery, coarse flour emery, fine flour emery, superfine emery.

**EMERY WHEEL.** A wheel made of emery used for grinding circular saws, etc.

**EMISSARIUM.** A sluice, flood-gate, channel or artificial canal formed for the draining of stagnant waters.

**EMOLLESCENCE.** That degree of softness in a fusible body when it begins to melt.

**EMPAISTIC WORK.** Work that bears some resemblance to the modern buhl, and consists in laying or impressing threads or pieces of metal into another metal.

**EMPEROR PAPER.** The largest kind of drawing paper, measuring sixty-six by forty-seven inches.

**EMPLECTION.** A method employed by the ancients for constructing walls, the front stones being wrought fair and the interior left rough and filled in with stones of various sizes.

**EMPRESS.** The name of a slate measuring twenty-six by sixteen inches.

**ENAMEL.** Paint and colours that are vitrifiable; a substance of the nature of glass rendered opaque by an admixture of oxides of metals with a flux.

**ENAMELLED BRICKS.** Are those having a white, light yellow or other coloured glazed surface like that of china.

**ENAMELLED GLASS.** Is that obscured in parts to a design which is

stencilled upon it; enamel or powdered glass is placed so as to form the pattern and fluxed in by heat.

**ENAMELLED SLATE.** Is often made to represent different varieties of marble; it is prepared by painting slate slabs, baking them and colouring them to pattern; they are then covered with a coating of enamel, rebaked and rubbed down and then polished.

**ENAMEL PAINT.** Consists of a metallic oxide, such as oxide of lead, or oxide of zinc, which is ground with a small quantity of oil and mixed with petroleum spirit holding resinous matter in solution; generally sold ready for use.

**ENCALLOW.** A surface layer of turf and mould, removing which is called "encallowing".

**ENCARPUS.** The festoons on a classical frieze, consisting of flowers, leaves, etc.

**ENCAUSTIC PAINTING.** A kind of painting in heated or burned wax, by which, among the ancients, the colours were rendered permanent in all their original splendour.

**ENCAUSTIC TILES.** Are those in which the colours are produced by substances mixed in with the clay previous to burning.

**ENCEINTE.** A fortified enclosure; the wall or rampart which surrounds a place.

**ENCRIINAL MARBLE.** Is that which derives its figure from embedded fossils, encrinrites or fossils of ordinary shells.

**ENDECAGON.** A plain geometrical figure bounded by eleven sides.

**ENDIRONS.** Iron plates on each side of the fire in a kitchen grate, movable at pleasure; andirons or dogs.

**END OF A STONE.** The two parallel sides which form the vertical joints.

**ENDOGENS.** Plants which increase by internal layers with no evident distinction between the wood and the bark, as the palm, sugar-cane, etc.

**ENDS.** Are pieces of plank, deal or battens less than eight feet long.

**ENERGY.** The capability of doing work. It is measured by the work produced.

**ENGAGED COLUMNS.** Are columns attached to a wall so that part of them is concealed; they are seldom less than a quarter or more than a half of their solid in the wall; when one-half is in the wall they are called semi-attached columns.

**ENGINEER.** One employed in delineating plans and superintending the construction of public works; one versed in and who practises engineering.

**ENGLISH BOND.** In brickwork, consists of alternate courses of headers and stretchers; called also "old English bond".

**ENGLISH CROSS BOND.** Differs from ordinary English bond in the stretchers of the successive stretching courses breaking joint with each other on the face of the wall, as well as with the headers of the adjoining heading courses.

**ENGLISH GARDEN WALL BOND.** Three courses of stretchers and one of headers.

**ENGLISH OAK.** Is a light brown or brownish-yellow colour, close grained, tough; it is more irregular in its growth than the other varieties, and heavier.

**ENGLISH SLATES.** Are more silicious than Welsh slates, therefore they do not cleave so well, but are quite as durable; they are chiefly obtained from Kendal, in Westmoreland, being thick, coarse, hard, tough, durable and of a greenish colour.

**ENGRAVE.** To cut figures, letters, or devices on stone, metal or wood with a graver.

**ENGRAVER.** A cutter of letters, figures or devices on stone, metal or wood; one who engraves; a sculptor; a carver.

**ENNEAGON.** A polygon or plane figure with nine sides or nine angles.

**ENRICHMENT.** An ornamental member of a plaster cornice; any ornament used in plastering.

**ENROCKMENT.** A mass of large stones thrown in at random to form the basis of piers, breakwaters, etc.

**ENSEMBLE.** A term denoting the masses and details considered with relation to each other; grouping of the parts or figures.

**ENTABLATURE.** The horizontal portion of an order of a column, which is over the capital, including in upward succession the architrave, frieze and cornice.

**ENTAIL or ENTAYLE.** The elaborated sculptured ornaments and carvings of the Middle Ages.

**ENTASIS.** A slightly convex curvature given in execution to the outline of the shaft of a column or spire.

**ENTER.** The act of inserting the end of a tenon in the mouth of a mortise previous to its being driven home to the shoulder.

**ENTERCLOSE.** An intermediate passage between doors; a passage between two rooms in a house.

**ENTRESOL.** A low storey between two higher ones; a suite of apartments usually between the ground floor and the first storey; the small window of such.

**ENTRY.** The passage into a house or other building.

**ENVELOPE.** In fortifications, a mound of earth raised to cover some weak parts of the works.

**ENVELOPE.** In architecture, the covering of a portion of the surface of a solid with a thin substance or wrapper.

**EOZON.** A structure presumed to represent the earliest trace of organic life in the rocks of the earth.

**EPAULE.** In fortifications, the shoulder of a bastion where one of the faces and one of the flanks meet.

**EPAULEMENT.** In fortifications, a sidework or work to cover sidewise, made of gabions, fascines or bags of earth.

**EPHEBEUM.** A building used by the ancients for exercise or wrestling in.

**EPHEBEUM.** The large hall in Roman baths in which youths practised gymnastic exercises.

**EPICRANITIS.** A term applied by the Greeks to the tiles forming the cyma or upper member of the cornice of their temples.

**EPICYCLE.** A little circle whose centre is in the circumference of a greater.

**EPICYCLOID.** A curve generated by any point in the plane of a movable circle, which rolls on the inside or outside of the circumference of a fixed circle.

**EPICYCLOIDAL WHEEL.** A wheel for converting circular into alternate motion or alternate into circular.

**EPIDOTE.** A mineral of a green or grey colour and vitreous lustre, consisting of silica and alumina, with lime or peroxide of iron or peroxide of manganese.

**EPIGENE.** In mineralogy, formed or originating on the surface of the earth; in a crystalline form not natural to a substance.

**EPIGRAPH.** An inscription on a building, expressive of its use or appropriation.

**EPISCENIUM.** In ancient architecture, the upper order of the scene in a theatre.

**EPISTILBITE.** A mineral, white and translucent, composed of silica, alumina, lime and soda.

**EPISTOMIUM.** The cock or spout of a water-pipe.

**EPISTYLIUM or EPISTYLE.** A massive piece of stone or wood laid on the abacus of the capital of a column; the architrave or horizontal course resting immediately upon the column.

**EPITHEDRALS or EPITITHIDAS.** A term sometimes applied to the cymatium on the raking or sloping cornices of a pediment.

**EPITITHEDES.** The crown or upper mouldings of the cornice of an entablature.

**EPURE.** In French architecture, a large working plan.

**EQUIANGULAR.** In geometry, consisting of or having equal angles.

**EQUIDISTANT.** At equal distances.

**EQUILATERAL.** In geometry, having all the sides equal.

**EQUILATERAL ARCH.** A pointed arch, the radii of which are equal to the span of the arch; also known as an equilateral Gothic arch.

**EQUILIBRIUM.** An equality of forces in opposite directions so as to mutually balance each other.

**EQUILIBRIUM VALVE.** The valve in the steam passage of a Cornish engine.

**EQUILIBRIUM VALVE.** That in which the pressure of the water is equalised so as not to resist opening or shutting.

**EQUIMULTIPLE.** A quantity multiplied by the same number as another quantity.

**EQUIPMENT.** In civil engineering, the necessary adjuncts of a railroad, as locomotives, etc.

**EQUITANGENTIAL.** A term applied to a curve whose tangent is equal to a constant line.

**EQUIVALENT.** In geometry, equal in size or area.

**ERASEMENT.** When applied to buildings, etc., implies entire destruction; demolition.

**ERBIUM.** A rare metal whose compounds are found in connection with a few others.

**ERECT.** To raise, as a building.

**ERECT.** In geometry, to erect a perpendicular is to draw a line at right angles.

**ERECTION.** A building of any kind; the act of raising or building; the state of being erected.

**ERG.** In mechanics, the unit of work.

**ERGASTULUM.** Called by the Greeks "sophonisteria"; a kind of prison or house of correction for slaves, contiguous to the country villas and farms of the Romans.

**ERINITE.** A native arseniate of copper, of an emerald green colour.

**ERISMA.** An arch-buttress, shore post, or prop, to hold up or support buildings.

**ERRATIC.** Applied to those boulders or substances on the earth's surface which have been transported from their original location.

**ERYTHRITE.** A flesh-coloured variety of felspar.

**ESCAPE.** In architecture, the scape of a column.

**ESCALLOPE.** A regular curving indenture in the margin of anything, or on the edge of a board or stone.

**ESCARP.** In fortifications, the side or slope of the ditch next the rampart.

**ESCARS.** Ridges of gravel found in Ireland.

**ESCOINSON** or **SCOINSON.** An old French term for the interior edge of a window side or jamb. The term is still used in Scotland, but spelt "scuntion".

**ESCRITOIRE.** A writing desk ; a box with instruments and conveniences for writing.

**ESCURIAL.** A huge gridiron-shaped granite pile about thirty miles from Madrid.

**ESCUTCHEON.** Is the name given to a brass plate for protecting a keyhole ; also applied to the plate—raised like a boss—on a door, from the centre of which the handle is suspended.

**ESCUTCHEON.** The shield on which a coat of arms is represented ; the shield of a family.

**ESPAGNOLETTE BOLT.** A bolt used for casements ; one turn of the handle fastens the sash both top and bottom.

**ESPALIER.** A lattice work of wood on which to train fruit trees and ornamental shrubs ; a row of trees in a garden having the branches trained and spread out like a fan.

**ESPALIER.** A kind of wire fence or hurdle ; used for training fruit trees on its wires.

**ESPLANADE.** A level walk or drive, especially a terraced one ; the void space between the glacis of a citadel and the first houses of the town ; the glacis of the counterscarp, or the sloping of the covered way towards the country.

**ESQUISSE.** The model of a statue or the first sketch of a picture.

**ESSENTIAL OILS.** Volatile oils obtained from plants, usually by distillation with water.

**ESSONITE.** Cinnamon stone.

**ESTABLISHMENT.** A place of residence or of business.

**ESTACADE.** A dike of piles in the sea.

**ESTAMINET.** A coffee-house where smoking is allowed.

**ESTATE.** Property, especially landed property.

**ESTIMATE.** The computed cost of a building before the works are commenced.

**ESTRADE.** Is a platform raised a few inches above the floor ; a level space.

**ETCH.** To produce figures or designs on copper or other metallic plates by eating out or biting with an acid the lines previously drawn with a needle on a coated surface.

**ETHIOPS.** A name given by the old chemists to certain dark coloured metallic preparations.

**ETHIOPS MARTIAL.** A black oxide of iron.

**ETHIOPS MINERALIS.** A dark grey sulphuret of mercury.

**ETRUSCAN.** Belonging to Etruria, an ancient district of Italy.

**ETRUSCAN VASES.** Vases found in Etruscan tombs, allowed now to be of Grecian design and workmanship.

**EUCALYPTUS.** A genus of Australian trees of the myrtle order of one hundred species.

**EUCHLORIC.** Of a distinct green colour.

**EUCHROITE.** Arseniate of copper, of a light emerald green colour.

**EUCHROME** or **LIGHT CAPPAGH BROWN.** Is produced from bog earth and manganese.

**EUDYALITE.** A rose-red or brownish-red mineral occurring in nearly opaque crystals.

**EUGUBINE TABLES.** Seven tablets of bronze discovered at Eugubium in 1444, containing inscriptions in Umbrian.

**EUKAIRITE.** A mineral of a shining lead grey colour, the cupreous seleniuret of silver.

**EUOTOMOUS.** Easily cleavable ; having distinct cleavages, as slates, etc.

**EURITE.** Feldspathic granite or the white stone of Werner.

**EURYTHINY.** The regular, just and symmetrical measures resulting from harmony in the proportions of a building or order.

**EUSTYLE.** A building in which the columns are placed at two and a quarter diameters apart.

**EVEN DISTRIBUTION.** The arrangement of design in such a manner that no unsightly break or void is apparent, so that no part of the ornament is unduly prominent, and so that the ornamental forms fill and adorn the spaces allotted to them.

**EVERGLADE.** A marshy tract of land with patches here and there covered with high grass.

**EVOLUTE.** A curve from which another curve is described; the origin of the evolvent or involute.

**EVOLUTE.** Is a curve from which any given curve may be supposed to be formed by the evolution or untapping of a thread from a surface, having the same curvature as the first curve.

**EVOLUTION.** The unfolding or opening of a curve and making it describe an evolvent or involute.

**EXCAVATE.** To dig, as for foundations, etc.

**EXCAVATION.** A trench, hollow or cavity formed by excavating; a cutting.

**EXCAVATOR.** A machine for excavating; one who excavates.

**EXCEPT BRICKS.** In specifications, implies that all the materials, labour, etc., are supplied by the contractor, but not the bricks.

**EXCESS.** In geometry and arithmetic, that by which one quantity or number exceeds another.

**EXCITATOR.** An instrument employed in the working of an electrical apparatus to prevent the operator being exposed to the effects of the galvanic or electric shock.

**EXCITATION.** A dynamo is "excited" when from rest it has acquired a voltage or power to send a current through a wire. Some machines take several minutes to excite to their normal voltage.

**EXECUTION.** In sculpture, the mode of performing a work of art, and the dexterity with which it is accomplished.

**EXEDRA OR EXHEDRA.** A small room, hall or portico in the baths and other buildings of the ancients, used for conversing in; a vestibule.

**EXEMPLAR.** A pattern, plan or model to be copied or imitated.

**EXFOLIATION.** Separation in scales, as slates, etc.

**EXHAUSTED RECEIVER.** The receiver of an air pump when the air has been pumped out.

**EXHAUST PIPE.** A pipe conveying the waste steam into the condenser or the atmosphere.

**EXHAUST PORT.** The exit passage for the steam from a cylinder.

**EXHAUST VALVE.** A valve in the exhaust passage of the steam cylinder of a Cornish engine.

**EXIT.** A term generally applied in theatres and music halls to the means of departure, as passages, etc.

**EXOGENS.** Or outward growers, are trees from which the timber used in building and engineering work is obtained.

**EXOSTRA.** In ancient architecture, a machine for representing the interior part of a building as connected with the scene in a theatre.

**EXPANSION ENGINE.** A steam engine in which the supply of steam is cut off previous to the stroke being complete, the rest of the power being supplied by the expansiveness of the steam already admitted.

**EXPONENTIAL CURVE.** One whose nature is defined by means of an exponential equation.

**EXTERNAL ANGLE.** An outward angle.

**EXTERNAL MITRE.** A mitre on a projecting or external angle.

**EXTRADOS.** The exterior curve of an arch, measured on the top of the voussoirs, as opposed to the soffit or intrados.

**EXTRA JOINTS.** Are the branch joints or junctions of one pipe with another.

**EXTRA PAROCHIAL.** Not within the limits of any parish; outside the parish.

**EXTRAS.** Extra work arising during the execution of a contract.

**EXTRAS ON.** Is a term found in quantities, etc.; it refers to labour only, such as the extra labour necessary in cutting and setting brick arches, etc.

**EYE.** A term signifying the centre of any part.

**EYE.** A junction on a drain pipe ; a small metal ring with a shank attached generally with a thread worked on, for fixing to wood.

**EYEBROW.** A term sometimes applied to the fillet.

**EYELET.** A hole through a wall.

**EYE OF A DOME.** The horizontal aperture on its summit.

**EYE OF A PEDIMENT.** Is a circular window in its centre.

**EYE OF A VOLUTE.** Is the circle at the centre from whose circumference the spiral commences.

## F.

**F.** As a numeral, stands for forty, and with a stroke placed over it forty thousand. It frequently stands for fellow, as F.R.S.

**F.** On lead pencils, denotes firm ; used for ordinary drawing.

**F.F.** Denotes very firm and double thick lead.

**FABER.** A name applied by the Romans to artisans or mechanics who worked in hard materials.

**FABRIC.** A structure ; a building, as an edifice ; anything framed by art and labour.

**FABRICA.** A Roman term for a workshop.

**FABRICATION.** The art-of building ; construction.

**FAÇADE.** The front view or elevation of an edifice or building when of some architectural pretensions.

**FACE.** The front of anything ; an exposed surface in brickwork, masonry or woodwork.

**FACE.** In fortifications, "the face of a bastion" is the two sides reaching from the flanks of the salient angle ; again, "face prolonged" is that part of the line of defence which is between the angle of the shoulder and the curtain.

**FACE BRICKS.** Are those suitable for the face of the walls of buildings ; sometimes "face bricks" are simply the best ordinary brick, or a pressed brick made especially for facework.

**FACE MOULD.** In handrailing, a thin pattern cut to the shape of the upper surface of the wreath of a handrail ; used for cutting the wreath out of the plank ; mould for setting out the face of a wall, having a vertical curvature.

**FACE OF A STONE OR BRICK.** The surface exposed to view.

**FACETTE.** The flat projection

between the flutings of a column ; in glass-making, an iron thrust into the mouth of a bottle, in order to convey it into the annealing tower.

**FACIAL ANGLE.** An imaginary angle formed either by drawing two lines, one horizontal from the nostril to the ear, and the other perpendicularly from the nostril to the most prominent part of the forehead, or by drawing a line over the most prominent parts of the face and from the occipital condyle to the base of the nose.

**FACING.** A term applied in the North to an architrave ; a covering in front for ornament, etc.

**FACING PAVIORS.** Are hard-burned malm bricks of good shape and colour, which are used for facing in first-class work.

**FACTABLING.** Same as Coping.

**FACTOR OF SAFETY.** Is the ratio in which the breaking load exceeds the working load, *i.e.*, the load which can be safely applied in practice.

**FACTORY.** Under the Factory Acts a factory is defined as follows : "A textile factory is one in which mechanical power is used incidentally to the manufacture of silk, cotton, etc. ; a non-textile factory is one in which mechanical power and hand labour are employed in the making for sale of any article".

**FAIR.** Same as Flush.

**FAIR AVERAGE LOT.** Applied to timber, would mean trees averaging thirty-three feet in length, 60 per cent. being over four-inch butts.

**FAIR ENDS.** In window sills, are the ends that project from the face of the brickwork, rubbed after sawing, or squared and rubbed ; if the sill is cut to length, by coping it and forming hollow stop to weathering.

**FAIR-TOOLED STONE.** That in which the furrows left by the chisel are disposed in regular order.

**FAIRWAY.** The navigable part of a river; the mid-passage in a short channel.

**FAIRY STONES.** The fossil remains of an echinite; frequently found in gravel pits.

**FAGGOT.** Of steel contains 120 pounds weight.

**FALDSTOOL.** The chair of a bishop enclosed by the railing of the altar; a small desk at which the litany is read; a kind of stool placed at the south of the altar, at which the sovereigns of England kneel at their coronation; a portable seat made to fold up in the manner of a camp stool.

**FALL.** Slope, gradient or inclination; in laying drains, the fall should be if possible one inch to the foot, and never less than one inch in every three feet for four-inch pipes, while for six-inch pipes the fall should never be less than one in five; a rope when used in conjunction with a pulley.

**FALL BOARD.** The wooden drop shutter of a window when arranged to move up and down on hinges.

**FALLING BAR.** The top bar of a kitchen range when made to turn round on a pivot, so as to fall forwards through a right angle.

**FALLING MOULD.** In handrailing, is the development of its vertical surface into a vertical plane, *i.e.*, shaped to the vertical longitudinal section of the rail.

**FALLING STONE.** An *aërolite*.

**FALL OF LAND.** A Scotch measure equal to thirty-six square yards.

**FALLOW.** Pale red or pale yellow; land left unsowed after ploughing.

**FALL PIPE.** A rain-water pipe.

**FALSE ATTIC.** An attic without pilasters, casements or balustrades; used for crowning a building.

**FALSE BEARING.** See Bearing Wall.

**FALSE CORE.** A brassfounder's name for a "drawback".

**FALSE DRAIN.** A drain along which no sewage passes, sometimes

used to obtain ventilation at a suitable point.

**FALSE HEADERS.** Short stones or bricks that look like headers on the face, but do not go deeper into the wall than the adjacent stretchers.

**FALSE PILE.** A timber added to a pile after driving to supplement its length.

**FALSE RED.** A second red which is sometimes put under the first to make it deeper.

**FALSE ROOF.** That part between the ceiling of the upper floor and the rafters of a roof.

**FAN.** A screen of rough boards sloping outward, fixed on the top of a hoarding in front of buildings, during erection or alterations, to protect the passer-by from falling rubbish, etc.; a flat metal plate placed at the back of the basin of a water-closet apparatus to spread the water in the basin.

**FAN.** A revolving wheel with blades used for producing a current of air.

**FANAL.** The French term for a lighthouse.

**FANCY SLATING.** That laid diagonally, or that when the slates are cut to a pattern.

**FANE.** A temple or church; a place consecrated to religion.

**FANG.** In mining, a niche cut in the side of an adit, or shaft, to serve as an air course; that part of a gate hinge that is let into the wall; that part of an iron tool that is let into the handle.

**FANLIGHT.** A light or sash over a door or casement.

**FANNER.** A contrivance for producing a current of air, as in a window, etc.

**FANON.** An embroidered scarf worn about the left arm of a Roman Catholic priest in celebrating mass; a church banner; the white cloth on which the laity made their obligations; the headdress of the Pope when celebrating mass pontifically.

**FANTRACERY VAULTING.** An elaborately carved work on a vaulted roof in the form of a fan; vaulting having all the ribs that rise from the springing of the vault of the

same curvature ; used in late perpendicular work ; fine examples exist in Henry VII.'s Chapel, Westminster, St. George's Chapel, Windsor, and in King's College Chapel, Cambridge.

**FANUM.** A place consecrated to religion, including the building and the ground belonging to it.

**FARAD.** Unit of capacity, defined by the condition that a coulomb effects a charge potential of one volt. A microfarad is capacity equal to the one-millionth of a farad.

**FAREHAM RED BRICKS.** Are of a fine deep colour and are much used for superior buildings ; they are made from a plastic clay found in the neighbourhood of Fareham, in very deep beds.

**FARLEIGH DOWN.** Is a soft, fine grained stone found in beds, of a red and yellow colour ; does not weather well ; used for tracery and internal work.

**FARRARIA.** See Granary.

**FASCIA.** A flat architectural member in an entablature ; a band or broad fillet ; a broad horizontal band forming one of the members of a cornice ; in a brick building, the jutting of the bricks beyond the windows ; a board fixed to the feet of the rafters of a roof to which the eaves gutter is often fastened.

**FASCLE.** The bands of which the epistylum of the Ionic and Corinthian orders are composed ; bands which the Romans were accustomed to bind round the legs.

**FASCINE.** A long faggot of young brushwood used in forming foundations on very soft soils.

**FAST AND LOOSE PULLEYS.** Two pulleys placed side by side on a shaft which is driven from another shaft by a belt ; when the machine is required to be stopped the belt is transferred to the loose pulley, the driving shaft still revolving to drive other machines.

**FASTI.** The Roman calendar which gave the days for festivals, courts, etc.

**FASTIGIUM.** The summit, apex or ridge of a house or pediment ; the pediment of a portico.

**FAT.** Containing a large proportion of cement ; sometimes used to signify the matrix of concrete.

**FATHOM.** A measure of six feet ; chiefly used for measuring the depth of water, quarries, wells or pits.

**FATHOM OF TIMBER.** Is 218 cubic feet.

**FATIGUE OF MATERIALS.** A term sometimes applied to the loss of strength materials undergo when repeatedly overstrained ; edged tools are frequently affected with fatigue, *i.e.*, they lose their power of keeping a fine edge ; this power is regained if the tools are laid by for a time.

**FAT LIME.** Lime produced by burning any stone consisting of nearly pure carbonate of lime.

**FAUBOURG.** A suburb in French cities, or what was originally such.

**FAUCES.** The passage from the atrium to the peristyle in a Roman house.

**FAUCET.** A term usually applied to the socket of a cast-iron pipe.

**FAUCET.** A spout with a peg or "spigot" for drawing liquor from a cask.

**FAULT.** A dislocation of the strata which may either give underground water a means of escape, or if filled with clay or other impervious material, may act as a natural dam across a permeable strata.

**FAUSSEBRAYE.** A mound of earth thrown round a rampart.

**FAÜTENIL.** An arm chair ; a membership in the French Academy.

**FAUTON.** A light iron rod sometimes used in the formation of a concrete floor.

**FAUX.** A narrow passage which formed a communication between the two principal divisions of a Roman house.

**FEATHER BOARDING.** Boarding in which the edge of one board overlaps another.

**FEATHER EDGE.** The edge of a board, thinner than the other edge.

**FEATHER EDGE BRICKS or VOUS-LOIR BRICKS.** Those having one edge thinner than the other ; generally used in arches.

**FEATHER EDGED.** A term applied to any thin body whose section is

trapezoidal, *i.e.*, thicker on one edge than on the other.

**FEATHER EDGED BOARDS** or **WEATHER BOARDS.** Are boards in which their section is of a triangular or trapezoidal form, *i.e.*, with one edge very thin. In fixing these boards they are tapped at the joints, a thick edge and a feather edge being placed together.

**FEATHER EDGED COPING.** That thinner on one edge than on the other, thus serving to throw off the water on one side only.

**FEATHER EDGED FILE.** A broad and flat file, slightly thicker in the centre than at the edges.

**FEATHERINGS.** Ornamental cusps formed by the junction of small arcs in architectural enrichments as in Gothic architecture.

**FEATHERS.** In carpentry, any narrow strips of timber to strengthen partitioning, framework, etc.

**FEATHER SHOT.** Copper, from the shape it assumes when dropped molten into cold water.

**FEATHER TONGUE.** A wood tongue cut diagonally across the grain; commonly called a "cross tongue".

**FECIAL.** Among the ancient Romans, one of a college of priests whose duty it was formally to declare war or make peace.

**FEE.** Recompense or compensation for services, especially for professional services.

**FEED CISTERN.** Sometimes called "feed head"; a small cistern connected with a boiler for the purpose of keeping it constantly full of water.

**FEEDER.** A cut or channel by which a stream or supply of water is brought into a canal.

**FEEDER.** Feeders in pairs are used to carry electricity to various points of a supply network.

**FEEDER.** A branch railway; a large head or supply of fluid metal to a mould in heavy castings.

**FEEDING HOUSE** or **SHED.** A farm building for stalling and fattening cattle.

**FEEDING SPADE.** See Server.

**FEED PIPE.** A pipe which feeds or supplies the boiler of a steam engine, etc., with water.

**FEED PUMP.** The force pump employed in supplying the boilers of steam engines.

**FEE ESTATE.** An estate held on some service or acknowledgment to the owner.

**FEE FARM.** A kind of tenure without homage, fealty or other service except as stipulated.

**FELDSPAR** or **FELSPAR.** A mineral of foliated structure; it consists of silica, alumina and potash; it is the constituent part of granite, gneiss, mica, slate, porphyry and most volcanic rocks.

**FELL.** A large open portion of land, generally less overgrown with shrubs than a moor; a barren or stony hill.

**FELLING TIMBER.** The act of cutting down a full-grown tree.

**FELLOES** or **FELLYS.** The outer rim of a wooden wheel.

**FELLY.** One of the curved pieces of wood which compose the rim of a wheel; the rim of a wheel.

**FELSTONE PORPHYRY.** Consists of a base which is a mixture of quartz and orthoclase (or felsite) with crystals of feldspar; found in various colours.

**FELSPATHIC SANDSTONES.** Are those containing a large proportion of feldspar.

**FELT GRAIN.** That position of splitting timber which is cloven towards the centre of the tree or transversely to the annular rings.

**FELT GRAIN** or **FELT.** A term sometimes applied to the silver grain or medullary rays of oak.

**FELTING.** The act of splitting timber by the felt grain.

**FEMALE DIE.** The concave die into which the male or convex die is struck.

**FEMALE SCREW.** The spiral threaded cavity into which a screw works.

**FEMERELL.** A lantern, louver or covering placed on the roof of a kitchen, hall, etc., for the purpose of ventilation.

**FEMUR.** The long flat projecting face between each channel of a triglyph; also used in the same sense as the Greek *meros*, which see.

**FEN.** A low marshy land; a marsh.

**FENCE.** A wall, hedge or line of posts and rails, to confine or protect land; a ring fence is one that encircles a whole estate.

**FENCE WITH TURNOVER TOP.** An iron fence in which the top of the standards are bent over and connected by a loose chain, or round top bar to prevent the near approach of cattle.

**FENCING.** The materials used in making fences; a casing round machinery in factories.

**FENDER PILES.** Those driven to protect work either on land or in water.

**FENDER WALL.** A wall built round the hearth of a fireplace on the ground floor, for the purpose of supporting it.

**FENESTELLA.** The niche at the side of an altar containing the piscina; a little window.

**FENESTRA.** A window; an entrance.

**FENESTRAL.** Pertaining to a window.

**FENESTRATION.** The system of construction and mode of design marked by windows, or the art of arranging symmetrically, picturesquely and conveniently the windows of a building.

**FENESTRIA.** Window blinds or casements closed with paper or cloth.

**FENGITE.** A transparent alabaster used for windows.

**FERETORY.** A shrine or tomb; a bier or coffin.

**FERIAE.** Holidays in ancient Rome during which there was a suspension from business and labour.

**FERRETTO.** Copper calcined with brimstone or white vitriol; used to colour glass.

**FERRIC ACID.** An acid of iron.

**FERRICALCITE.** A calcareous earth having much iron in it.

**FERRIC OXIDE.** A sesquioxide of iron.

**FERRIFEROUS.** Producing or yielding iron.

**FERRILITE.** Rowley rag; a trap rock with oxide of iron in it.

**FERRUGINATED.** Having the colour or properties of the rust of iron.

**FERRUGINOUS.** Containing iron; of the colour of iron rust.

**FERULE.** A metal ring driven on the handle of a tool to keep it from splitting; a short piece of pipe screwed into a cast-iron main for the purpose of joining a service pipe with it.

**FESSE.** In heraldry, a broad band crossing the shield horizontally and possessing the third part of it; one of the nine honourable ordinaries, and representing the girdle of a knight.

**FESSE POINT.** In heraldry, the centre of an escutcheon.

**FESTOON.** A garland of flowers, etc., suspended so as to hang in an elliptical curve and with the ends depending; an ornament of carved work in imitation of such a garland.

**FETCHING THE PUMP.** The act of pouring water into a pump to expel the air contained between the lower box or piston and the bottom of the pump, in order to make the plunger "suck".

**FIBRE.** Anything of a threadlike character, as the fibre of wood or iron.

**FIBROUS ASPHALT.** Is a kind of felt well impregnated with asphalt, mixed with grit; made in slabs thirty-two inches long and from four and a half to thirty-six inches wide.

**FIBROUS PLASTER.** Is composed of a thin coating of plaster of Paris on a canvas backing which is stretched on a light frame.

**FICTILE.** Moulded or mouldable into form by the potter; an earthen vessel or other article moulded and baked.

**FICTOR.** A Roman artist or potter.

**FIDD.** A piece of iron or wood to open the strands of ropes.

**FIDDLE WOOD.** A genus of trees with a durable timber.

**FIELD.** The ground or blank space on which figures are shown; a piece of land enclosed for tillage or pasture; open country.

**FIELD.** In heraldry, the whole surface of a shield.

**FIELD BOOK.** A book used in surveying, in which are set down the angles, distances, etc.

**FIELDING PANEL.** Scotch term for raised panel.

**FIELD DRAINS.** Unsocketed pipes of terra-cotta or brick clay; used for agricultural purposes.

**FIELD MAGNET.** See Magnet.

**FIGULATE or FIGULATED.** Made of potter's clay; moulded; shaped.

**FIGULINE.** Potter's clay.

**FIGURATE NUMBERS.** Numbers formed according to certain laws, and having peculiar relations to different geometrical figures, as triangles, squares, pentagons, etc.

**FIGURE.** The form of anything in outline; a diagram; shape; in geometry a "figure" is any plane surface comprehended within a certain line or lines; the terminating extremes or surface of a body.

**FIGURE.** The ornamental or flowery grain in timber.

**FIGURED.** Wood is said to be "figured" when the grain is variegated; adorned with figures.

**FIGURE MAKER.** A modeller; one who practises the art of moulding and casts busts, animals, etc.; a maker of anatomical models for artists.

**FIGURE WORK.** In lead glazing, work in which human figures are introduced.

**FILAGREE.** In the arts, a kind of enrichment in gold and silver.

**FILEMOT.** A yellowish-brown colour.

**FILLERS.** Are preparations for filling up the pores of wood before it is stained or polished.

**FILLET.** In heraldry, a kind of orle or bordure.

**FILLET.** Any small scantling less than a batten; a small moulding of square section; a narrow strip of wood or slate; the intervals or spaces between the flutes on the shaft of a column; any narrow flat moulding or surface; fillets are used either to separate or finish other mouldings.

**FILLET GUTTER.** A sloping gutter with a learboard and fillet thereon to divert the water.

**FILLETING.** A narrow strip of cement used in common work instead of lead flashing.

**FILLING.** Applied to brickwork and masonry, means the interior of the wall.

**FILLING IN PIECES.** Short timbers less than full length fitted against roofs, groins, partitions, etc.

**FILLING IN AND RAMMING.** Consists of filling in the earth round footings, trenches for drains, etc., in layers of earth from six to twelve inches thick, and ramming (or punning) same with a wooden rammer.

**FILLISTER.** A plane similar to a plough, used for rebating.

**FILLISTERED JOINT.** A rebated joint.

**FILLISTERING.** The act of rebating; a method of rebating flooring boards by means of a fillister plane when not planed by machinery.

**FILTRATION.** The cleansing of sewage by passing it through a gravel or sand filter.

**FILTERING CAP.** A pneumatic apparatus used for the purpose of demonstrating the pressure of the atmosphere on the upper surface of a fluid, when the pressure is removed from beneath.

**FILTERING MACHINE.** Any contrivance by which liquids may be filtered.

**FILTERING STONE.** Any porous stone, such as sandstone or oolite, through which water may be filtered.

**FIN.** A thin excrescence on the surface of a casting.

**FINE AXED STONE.** Is executed in a more careful manner than "single axed work".

**FINELY PICKED STONE.** See Close Picked Stone.

**FINE POINTED STONE.** Is when a smoother finish is desired, a pick with a fine point is used.

**FINE SET.** Said of a plane when set so as to take off fine shavings.

**FINE STUFF or PUTTY.** In plastering, is pure lime slaked with water until it is of the consistency of cream; it is then allowed to stand

for the water to evaporate and until it is of the proper thickness for use, when a little sand and hair are added; "fine stuff" is used for the finishing coat.

**FINGER PLATE.** A plate fixed on the stile of a door to protect the paint.

**FINGER POST.** A post, usually with a finger pointing, for directing passengers to the road.

**FINGER STONE.** A fossil resembling an arrow.

**FINIAL.** A branch of foliage or piece of ornamental turning which terminates pinnacles, canopies, pediments or ridges.

**FINING OFF or SETTING.** In plastering, is the third or last coat of plaster on walls.

**FINISH.** The last smooth coat of plaster on a wall.

**FINISHED GROUND or WROUGHT GROUND.** In joinery, a ground exposed to view, when it is wrought, beaded, etc.

**FINISHING COAT.** The last coating of paint, plaster or stucco.

**FINISHINGS.** Work done after a building is roofed in.

**FINITE FORCE.** A force that acts for a finite time, such as the force of gravity.

**FINLAND DEALS.** Are deals chiefly of first and second quality timber, and generally come into the market unbranded or only dry stamped.

**FIR.** The name of several species of cone-bearing trees, highly valued for their timber.

**FIR FIXED.** Timber put together without being framed or wrought.

**FIR FRAMED.** Rough timber framed but not planed.

**FIR-IN-BOND.** An expression used to denote lintels, bond timbers, wall plates and all timbers built in walls.

**FIR-NO-LABOUR.** Rough timber employed in walls, without being planed or framed.

**FIR POLES.** Small trunks of fir trees from ten to sixteen feet long; used in rustic work and for scaffolding.

**FIR WROUGHT.** Timber planed on the side and edges.

**FIR WROUGHT AND FRAMED.** That which is both planed and framed.

**FIR WROUGHT, FRAMED AND REBATED.** That which is planed, framed and rebated.

**FIR WROUGHT, FRAMED, REBATED AND BEADED.** That which is framed, rebated and beaded or moulded.

**FIRE BACK.** A large flat fire-brick placed at the back of a fireplace.

**FIRE BARS.** The bars of a furnace on which the fuel rests.

**FIRE BASKET.** A small portable grate for a bedroom.

**FIRE BOARD.** A chimney board used to close a fireplace in summer.

**FIRE BRICK.** A brick that will sustain intense heat without fusion; made either of pure clay or of a mixture of pure clay and clean sand, or in rare cases of nearly pure silica cemented with a small proportion of clay; fire-bricks are used when an extremely high heat has to be resisted.

**FIRE BUCKET.** A bucket kept full of water, and placed about factories and workshops in case of fire; a bucket to convey water for extinguishing fires.

**FIRE CLAY.** A kind of clay that will sustain intense heat, used in making fire-bricks; fire-clay is found throughout the coal formation, but that obtained from Stourbridge is considered the best. The fire-clays of Newcastle and Glasgow are also much esteemed.

**FIRE COCK.** A cock or spout to let out water for extinguishing fire.

**FIRE CRACKS.** Are fine cracks seen in the setting coat of plaster, caused from the unequal shrinking of the different coats.

**FIRE DOG.** Same as Andiron, which see.

**FIRE ENGINE.** An engine for throwing water to extinguish fire and save buildings.

**FIRE ESCAPE.** A contrivance for escape from the upper part of a building when on fire.

**FIRE GUARD.** A framework of iron to be placed in front of a fireplace.

**FIRE HOOK.** A large hook for pulling down buildings in conflagrations.

**FIRE INSURANCE.** An indemnity against loss from fire.

**FIRE INSURANCE.** An office for effecting insurances against fire.

**FIRE IRONS.** The irons belonging to a fireplace, as the shovel, etc.

**FIRE KILN.** An oven for heating or baking anything.

**FIRE LUMP.** A large fire-brick of special shape; used in setting a boiler.

**FIRE PAN.** A pan for holding or conveying fire.

**FIRE PLACE.** That part of the opening of a chimney which faces the room; a hearth.

**FIRE PLUG.** A plug for drawing water from a pipe to extinguish fire.

**FIREPROOF FLOOR.** A floor generally made of concrete and iron according to some approved method.

**FIRE SCREEN.** A kind of movable ornamental screen placed before a fire as a defence from the heat; a protection against fire.

**FIRE STONE.** Iron pyrites, a kind of freestone which bears a great degree of heat.

**FIRKIN.** A small cask; a measure; the fourth part of a barrel or nine imperial gallons.

**FIRM.** Said of a floor, when, on being jumped on, it remains firm; not easily moved.

**FIRM EARTH.** The term "firm earth" usually means gravelly soils, hard clay, hard earth, dry chalk and dry sand.

**FIRMER CHISEL.** An ordinary joiner's chisel.

**FIRRINGS or FURRINGS.** The pieces of timber employed to bring any piece of work in carpentry to a regular surface when the work is uneven either through the sagging of the timber or other causes.

**FIRRINGS.** Short pieces of timber attached to the feet of the rafters of a roof for carrying the eaves beyond the line of the wall.

**FIRRING TO FALLS.** A tapering strip nailed to joists to bring them level.

**FIRST-CLASS MASONRY.** A term sometimes applied to ashlar work.

**FIRST COAT.** In plastering, is the first layer of plaster put on the laths when only two coats are used; when three coats are used it is called "pricking up".

**FIRST FLOOR.** The floor or tier of apartments next above the ground floor.

**FIRST-SIZE KNOTTING.** Consists of grinding red lead in water and mixing it with strong glue size; used hot dries in about ten minutes; prevents exudation.

**FISH.** A piece of wood fastened to another to strengthen it.

**FISHBACK FILE.** A file having two convex sides.

**FISH BEAM.** A beam of timber bellying out on the underside.

**FISHED BEAM.** A beam in which a fish joint is made.

**FISHING A BEAM.** The process of making a fish joint in a beam.

**FISH GLUE.** A glue made from the skins and other parts of fish. A very strong glue is made in China by boiling down the swimming bladders of several kinds of fish.

**FISH JOINT.** A joint in which the ends of iron plates, girders or beams of timber meet or butt one another; the joint is covered or "fished" with a short iron plate placed one on both sides, the whole being bolted together.

**FISH PLATES.** Are iron plates used when two pieces of timber are butted together for the purpose of acquiring a greater length; the fish plates are placed across the joints, the whole being held together by iron bolts.

**FISHTAIL BURNER.** A burner from which the gas issues through two small holes, the jets impinging on each side.

**FISSILE.** Naturally splitting, as wood in the direction of the grain.

**FISTUCA.** A weight which is raised by pulleys, etc., to a given height, and then allowed suddenly to fall on the head of a pile; a monkey.

**FISTUCA.** An instrument used by the Romans for ramming down pavements and the foundations of buildings.

**FITCH.** A small brush used by painters to put in lines, etc.

**FITMENT.** Fittings for a recess; an inglenook.

**FITTER.** A workman who finishes ironwork or machinery, the parts having been made in the rough by the smith or founder.

**FIVE WIRE SYSTEM.** See Three Wire System.

**FIXED.** Said of joinery, etc., when secured in its proper place.

**FIXED AIR.** Carbonic acid.

**FIXED BODIES.** Those which bear great heat without becoming volatilised.

**FIXED OILS.** Those which remain in a permanent state and are not easily volatilised; they are generally of a fatty nature and do not evaporate on drying, and will generally bear a temperature short of 500° F. without decomposing; they are extracted from vegetable substances by pressure.

**FIXED POINTS.** The "fixed points" on a thermometer are the heights at which the liquid, usually mercury, stands at different temperatures.

**FIXING FILLET.** A slip of wood built in the joint of a wall, for fixing woodwork to.

**FIXTURE.** A term applied to all articles of a personal nature affixed to land, the article being let into or united with the land or with some substance previously connected therewith.

**FIXTURES.** A term usually applied to shop fittings, etc., when permanently attached or fixed.

**FLAG.** A flat stone used for paving; to lay with flat stones.

**FLAGGING.** The act of laying with flag stones; a pavement or sidewalk of flag stones; the flag stones.

**FLAGSTONE.** A term usually applied to any stone with a good natural cleavage, and which splits easily into thicknesses required for paving purposes.

**FLAKE WHITE.** The purest description of white lead in a flaky or scaly form, prepared by the action of the acid of grapes on lead; basic nitrate of bismuth.

**FLAMBOYANT.** Denoting a Gothic style that prevailed in France in the fifteenth and sixteenth centuries; so named from the flame-like wavings of its tracery.

**FLAME COLOURED.** Of a bright yellow colour.

**FLAMING.** Bright red or yellow.

**FLANCH.** In heraldry, one of the honourable ordinaries formed by an arched line drawn from the corners of the chief; in castings, a flange.

**FLANDERS BRICK.** A soft brick for cleaning knives, etc.

**FLANGE.** The upper or lower part of a girder where the material is collected to resist the stresses of tension or compression; a disc cast on the end of a metal pipe for the purpose of forming the joint; a projecting edge on the rim of a wheel; practically, any projecting edge on a casting.

**FLANGED GIRDER.** Is one in which a separate plate is riveted to the web to form the flange.

**FLANGED JOINT.** In plumbing, is when a vertical pipe has to be supported, such as when passing through a floor; a circular washer is placed on the floor and the pipe coming up passed through it and turned slightly over with the turn-pin, the other pipe being inserted and then soldered and wiped to shape.

**FLANK.** Scotch term for a valley.

**FLANK.** The side of a building; that part of a return body which joins the front; in houses the party walls are the "flank walls".

**FLANK.** In fortifications, that part of a bastion which reaches from the curtain to the face.

**FLANK FICHANT.** In fortifications, the flank from which the cannon, when playing, fires directly on the opposite bastion.

**FLANK RESANT.** In fortifications, the point from which the line of defence commences.

**FLANK WALL.** A side wall.

**FLANNING.** The internal splay of a window jamb.

**FLAP.** The leaf of a table; that part of a counter top hinge to permit passage; one of the pieces of framing of which a folding shutter is composed; a trap-door; anything broad and flexible that hangs loose.

**FLAP TRAP.** An iron flap hung over the outlet of a drain into a sewer, to prevent rats, etc., coming into the drain.

**FLARE BURNT LIME.** Lime that is burnt in "flare kilns".

**FLARE KILNS or INTERMITTENT KILNS.** Are those having the fuel below so that the flame only reaches the stone in the kiln above; they are usually in the form of a cylinder.

**FLASHE.** A sluice on navigable rivers for raising the waters over shoals, etc.

**FLASHED GLASS.** Is the ordinary sheet glass coloured to a small depth on one side only.

**FLASHING.** The edges of sheet lead, in gutters, etc., turned up and into the joints of the brickwork, or into a groove or raglet about an inch deep in stonework, to prevent injury from the rain splashing, etc.

**FLASHING BOARD.** A board carrying a lead flashing; used when the roof is not boarded as a whole. See *Lear Board*.

**FLASKS.** In founding, iron frames or boxes without tops or bottoms, which are used in casting.

**FLAT.** That part of the covering of a building which is laid horizontally and usually covered with lead or other material; a suite of apartments all on one floor; a floor in a house.

**FLAT.** Said of a wood panel when not chamfered at the edges; said of painting when finished by "flattening".

**FLATBAND.** A plain square impost.

**FLAT BAR FENCING.** Iron fencing in which the horizontal bars are of flat one inch by three-quarters of an inch or so of iron.

**FLAT JOINT or FLAT FLUSH JOINT.** Is that in which the mortar is pressed flat and flush with the face of the

wall without any trimming or cutting.

**FLAT JOINT JOINTED.** A "flat joint" having a line marked with the edge of the trowel along the centre of the joint.

**FLAT JOINT POINTING.** Of which there are three kinds: the first is laid on with a trowel and the top edge cut off along a straight edge with a trowel or "Frenchman," which gives the joint the appearance of having been struck when the bricks were laid. The second kind is cut off top and bottom and is sometimes half tuck. The third kind is done by filling the joints level with the bricks and rubbing over with a stock brush. Washed sand and lime made into a stiff mortar is the only pointing material required for flat joint pointing.

**FLAT ROOF.** A roof having an inclination not exceeding three-quarters of an inch to the foot.

**FLATTING.** A mode of painting, in which the paint, being mixed with turpentine, leaves the work "flat" or without gloss; the wall to be flatted or painted must be thoroughly dry, and all holes or cracks stopped up with plaster of Paris; the walls are then rubbed down with sandpaper.

**FLATTING.** A method of preserving gilding unburnished by touching it with size; rolling out metal by cylindrical pressure.

**FLAT TOPPED ROOF.** One in which the apex of the triangle is cut off flat.

**FLAW.** A term generally used in reference to defective iron; a crack; a defect.

**FLEAK.** A small lock.

**FLEAKING.** A covering of reeds in the thatching of houses.

**FLECHE.** In fortifications, a simple redan, usually constructed at the foot of a glacis.

**FLEET DIKE.** An embankment for preventing inundation.

**FLEMISH BOND.** A mode of building brickwork, each course showing alternately a stretcher and a header. When both faces of the wall is done in this way it is called "double

Flemish," and single when one side is Flemish bond and the other English.

**FLEMISH BRICKS.** A kind of brick used for paving, seventy-two of which will pave a square yard; originally imported from Flanders; they are harder than common bricks and of a yellowish colour.

**FLEMISH GARDEN WALL BOND.** A description of brickwork in which each course has one header to three or four stretchers.

**FLEUR.** An ornament for a ridge tile made in a separate piece and fitted into it.

**FLEUR-DE-LIS.** The ancient trophy of France.

**FLEURETTE.** In heraldry, terminating with a fleur-de-lis.

**FLEXIBILITY.** That property of bodies which admits of their bending.

**FLEXURE.** The bending or curve of a line or surface.

**FLEXURE OF A CURVE.** A curving either convex or concave with respect to a given straight line.

**FLIER.** A straight step in the straight portion of a stair.

**FLIGHT.** A series of steps that are generally all parallel to each other; the stairs from one landing to another.

**FLINDERSIA.** A useful Australian tree of the mahogany family with a timber little inferior.

**FLINT.** A variety of quartz, consisting mainly of silica, with a little oxide of iron, alumina and water.

**FLINT GLASS.** A superior kind of glass distinguished by its containing oxide of lead, to which it owes some of its most valuable qualities.

**FLINT SLATE.** A variety of slate which contains a large proportion of silicious earth.

**FLITCH.** A term applied to a case of veneers usually holding about 500 sheets.

**FLITCH.** A term sometimes applied if, after a log is cut up the centre, the pieces are more than six inches thick; they are called flitches.

**FLITCH or FLITCH PLATE.** An iron plate placed between two pieces of timber to form a beam or girder.

**FLITCH BEAM.** Is when an iron plate is bolted between two pieces of timber to form a beam or girder; also termed a "flitched girder," "flitched beam" and "sandwich beam".

**FLITCH BEAM.** This term is also applied to beams made by cutting a balk of timber down the middle and bolting them together with the sawn sides kept outwards; slips of wood are placed between them about one inch thick to keep them apart and allow the air to circulate between them.

**FLOAT.** A kind of wooden rule or trowel with which plasterers float over and smooth the plastering on walls. To "float" is to apply the second coat of plastering. Floats used by plasterers are of three kinds: (1) the "hand float," which is a short piece of stuff about nine inches long and three inches wide with a handle on its upper surface; (2) the "quirk float," which is used on or in angles; (3) the "Derby float," which is so long that it requires two men to use it.

**FLOAT BOARD.** A board fixed to the rim of a water wheel to receive the impulse of the stream.

**FLOATED.** A term applied to timber when it has been floated down the river in a raft after being felled; on being dried it is described as "dry floated".

**FLOATED DEALS.** The term applied to deals that have been floated down a river from the felling ground.

**FLOATED, LATH AND PLASTER.** Plastering of three coats, of which the first is pricking up, the second floating or floated work, and the last of fine stuff.

**FLOATED WORK.** Plastering rendered to a perfectly smooth plane by means of a float.

**FLOATING or SCREEDING.** In plastering, is the second coat of plaster put on a wall; it is called "screeding" from its being brought to a level surface with the screeding rule and hand float.

**FLOATING BRIDGE.** A bridge consisting of logs of timber, with a floor of plank supported wholly by the water.

**FLOATING CLOUGH.** A movable machine for scouring out channels and inlets by stirring up the silt for the stream to carry off.

**FLOATING DOCK.** A floating graving dock, constructed now of compartments of iron.

**FLOATING HARBOUR.** A break-water formed of large masses of timber fastened together, and which rises and falls with the tide.

**FLOATING PIER.** A landing place which rises and falls with the tide.

**FLOATING RULE.** A straight edge used by plasterers to bring the second coat to a plane surface; a screeding rule.

**FLOATING SCREEDS.** Strips of plaster ranged and adjusted for guiding the float.

**FLOATING SCREEDS.** See Screeds.

**FLOATS.** The boards fixed on undershot water-wheels by which they act.

**FLOATSTONE.** A stone used for rubbing bricks smooth; used for curved work; it is made the reverse of the intended finished surfaces; quartz of a spongy texture which floats on the surface of the water.

**FLOCK PAPER.** Wallpaper having the design formed by the adhesion of flock sheared off from the surface of woollen cloth; the design is printed on the paper first in size, next in varnish; the flock is then sprinkled on, adhering to the varnish, thus forming the pattern.

**FLOOD GATE.** A gate or sluice that can be opened for letting water run through, or shut to prevent it.

**FLOOR.** A platform of boards or planks laid on timbers; that part of a building provided for walking on; a storey of a building.

**FLOOR JOIST.** A joist supporting a floor.

**FLORENTINE FRESCO.** A kind of painting for decorating walls; first used at Florence.

**FLORENTINE LAKE.** A pigment made from cochineal.

**FLORENTINE MOSAIC.** A mode of inlaying tables and plane surfaces.

**FLORIATED.** Ornamented with florid carvings.

**FLORICOMOUS.** Having the head ornamented with flowers.

**FLORID STYLE.** A highly ornamented kind of Gothic architecture of great beauty and elaborateness. The period of the Florid Gothic or Florid English or Tudor style is from about 1400 to 1537; many churches built in the time of Henry VII. exist in Somersetshire.

**FLOSS.** A fluid glass floating on iron in the furnace; produced by vitrification of oxides and earths.

**FLOTANT.** In heraldry, flying in the air, as a banner.

**FLOW or FLOW PIPE.** A term applied to that pipe by which the water leaves the boiler in a circuit of hot-water pipes.

**FLOWING TRACERY.** A term applied to tracery having the lines of the pattern ramified and flowing into each other.

**FLUE.** The long open tube of a chimney from the fireplace to the top of the shaft or stack, for the passage of smoke.

**FLUES CORED AND PARGETTED.** A thin coat of lime, hair and cow-dung with which a bricklayer lines the flue as he brings the work up.

**FLUING.** The same as Splayed, which see.

**FLUOR.** A beautiful mineral, often crystallised; composed of fluoride of calcium; usually called "fluorspar".

**FLUORIDE.** A compound of fluorine with a metallic base.

**FLUSH.** To clean out with a rush of water as a water-closet; a flow of water as in flushing a sewer; a complete bedding of masonry or brick-work, so as to leave no vacant space; also termed "bedded".

**FLUSH.** In masonry or brickwork, the aptitude of two brittle bodies to splinter at the joints where the stones or bricks come in contact when contiguous in a wall.

**FLUSH.** A term used by workmen to signify a continuity of surface in two bodies joined together and being level or "flush," *i.e.*, one side of joint does not project beyond that of the other.

**FLUSH BEAD.** A head stuck on a flat surface and level with it.

**FLUSH BOLT.** A bolt which is sunk in the face of the door, etc., with which it lies flush.

**FLUSHDOWN CLOSET.** See Wash-down Closet.

**FLUSHED JOINT.** In masonry, a joint in which one of the stones has had a small piece broken off through uneven bedding.

**FLUSH HANDLE.** Drawer or other handles which fold down into a recess, and flush with the surrounding surface.

**FLUSHING.** Same as Grouting, which see.

**FLUSHING TANK.** An apparatus by which small intermittent discharges of water are stored until the tank is full, when the whole of the contents is automatically emptied rapidly into the drain, thus flushing it.

**FLUSH JOINT.** A joint in which the mortar is pressed flat with the trowel leaving the surface of the joint flush with the face of the wall. Same as Flat Joint.

**FLUSH JOINT.** A joint formed in stones by hollowing the beds below the plane of the chisel draughts round the edges. This should not be allowed as it causes all the pressure to be thrown on the edges of the stone which frequently splinter owing to it.

**FLUSH PANEL.** A panel brought to the same plane as the face of the work; when the panel is of wood the edges are rebated to form tongues to fit into the grooves in the stiles and rails for its reception.

**FLUTED.** Having flutes; channelled.

**FLUTED GLASS.** Is that of a wavy section, and having flutes or corrugations on both sides.

**FLUTES or FLUTINGS.** Channels or semicircular grooves cut on the shafts of columns or pilasters or where required. Tuscan columns are never fluted.

**FLUX.** A certain substance used by plumbers to make solder flow more easily or smoothly; resin or a tallow candle is sometimes used as

a "flux"; any substance or mixture to promote the fusion of metals or minerals.

**FLY.** That part of a vane which points and shows which way the wind blows.

**FLYER.** A term sometimes applied in stairs to the ordinary step or tread.

**FLYERS.** A series of steps, in a flight of stairs, that are parallel to each other.

**FLYING BRIDGE.** A bridge of pontoons.

**FLYING BUTTRESS.** An arched brace of masonry for strengthening the nave (generally), or central part of a Gothic edifice when it rises considerably above the side aisles or wings.

**FLYING SHORE.** Is a horizontal shore between two buildings.

**FLY NUT.** In plumbing, a nut used for securing the end of a pipe in a cistern or basin.

**FLY RAIL.** That part of a table which is drawn out to support the leaf or flap.

**FLY WHEEL.** A wheel in machinery that equalises the effect of the moving power.

**FOCUS.** The name given in the ellipse to each of two fixed points in the major or transverse axis; a point in the parabola, ellipse or hyperbola where rays reflected from all points meet; a central point or point of convergence; in geometry and the conic sections, a point on the concave side of a curve to which the rays are reflected from all points of such curve.

**FOCUS.** A term applied by the Romans to an altar, a fireplace or hearth.

**FODDER or FOTHER.** A weight for pig lead, usually about nineteen and a half hundredweights, but varies according to the district.

**FOIL.** A small rounded leaf-like form in window tracery, panelling, etc.; the spaces between the cusps of the featherings of Gothic architecture; a leaf or thin plate of metal, as tinfoil.

**FOILED.** Ornamented with foils.

**FOILING.** The assemblage of foils in tracery.

**FOLDING DOORS.** Are those made to meet each other from the opposite jambs to which they are hung; they are generally rebated together, and have a bead generally stuck along the joint to break it; when shut they have the appearance of one entire door.

**FOLDING FLOORS.** A method of laying floors by nailing down first every fifth board rather closer together than the united widths of four boards, and forcing the intermediate ones into the space left for them by jumping upon them.

**FOLDING JOINT.** A joint made like a rule joint or the joint of a hinge.

**FOLDING SCREEN.** An upright portable screen which folds together in leaves.

**FOLDING SHUTTER.** A shutter made up of leaves hinged so as to fold back into small compass.

**FOLD JOINT.** See Welt Joint.

**FOLIAGE.** A sculptured group of leaves and flowers, so arranged as to form architectural ornaments.

**FOLIATE.** To adorn with leaves, etc.; a curve of the third order.

**FOLIATED.** Adorned with foils, leaves, flowers or branches.

**FOLIATION.** The use of small arcs or foils in forming tracery, the arches being termed the "foliations," and the points, cusps or featherings.

**FONT.** A basin to contain water for baptising; a fountain.

**Foo.** The Chinese word for department.

**Foot.** A measure of length of twelve inches; also used to express surface and solidity, such as foot superficial and foot cube.

**FOOT BARRACKS.** Barracks for infantry.

**FOOT BOARD.** A support for the feet under desks, etc.; a board at the foot of a bed.

**FOOT BRIDGE.** A narrow bridge for foot passengers only; a pavement.

**FOOTING BEAM.** A tie beam.

**FOOTING PIECE.** A short thick

piece of timber forming a foundation for a shore; generally placed at right angles to the slope of the shore.

**FOOTINGS.** The projecting courses of stones or bricks at the foot of a wall, widened out so as to distribute the weight; foundations; bases.

**FOOTINGS.** The footings of a chimney are called "coddings".

**FOOT OF A VERTICAL LINE.** In perspective, that point in the intersecting line which is made by a vertical plane passing through the eye and the centre of the drawing.

**FOOT OF THE EYE DIRECTOR.** In perspective, that point in the directing line made by a vertical plane passing through the eye and the centre of the drawing.

**FOOT PACE.** The dais or raised floor at the upper end of an ancient hall. Same as Halfpace or Half-space Landing, which see.

**FOOT PATH.** A narrow path or way for foot passengers only; a pavement.

**FOOT POUND.** The unit of work or work required to raise one pound through one foot.

**FOOT RULE.** A measure twelve inches long.

**FOOTS.** A refuse or sediment which falls to the bottom in linseed oil.

**FOOT SCRAPER.** An iron scraper at an entrance door to remove the dirt from the feet.

**FOOT STALL.** The base or plinth of a building; the plinth or base of a pillar.

**FOOTSTONE.** A stone built into the bottom of a gable or other similar situation to support the coping above; also called "springer," "kneeler," "skewtable," "skew".

**FORCE.** The course of motion in a body when it begins to move or when it changes its direction from the course in which it was previously moving.

**FORCE CUP.** A contrivance made of india-rubber in the shape of a cup or half of a ball, with a handle fixed on the top; it is used to clear or unstop sinks, washbasins, etc., as follows: having taken the plug out, the basin is filled with water and

the force cup is then placed sideways (to ensure its filling) into the water, and completely covering the hole in the basin, the handle is then quickly pressed up and down, the result being that the pipe is cleared.

**FORCE PUMP.** A pump by which water is forced up, under the pressure of a solid piston or plunger, to a height above the place where the pump is fixed.

**FORCER.** In mechanics, a solid piston applied to pumps, for the purpose of producing a constant stream, or of raising water to a greater height than it can be raised by the pressure of the atmosphere.

**FORCING HOUSE.** A hothouse.

**FORCING PIT.** A sunken pit of wood or masonry, for containing the fermenting materials used to produce bottom heat in forcing plants.

**FORE CHUCK.** An appendage to a turning lathe.

**FORE DOOR.** The door in the front of a house.

**FORE FRONT.** The principal or entrance front of a building.

**FOREIGN GOLD LEAF.** Is thinner and the leaves smaller than that made in England.

**FORE PLANE.** A jack-plane; the first plane used after the saw or axe.

**FORE SHORE.** The sloping part of the sea-shore lying between the high and low watermark.

**FORESHORTEN.** In perspective, the diminution which the representation of the side or part of a body has, in one of its dimensions, compared with the other, occasioned by the obliquity of the corresponding side or part of the original body to the plane of projection.

**FORESTAFF PLANE.** A plane used for forming convex cylindrical surfaces.

**FOREST MARBLE.** A limestone abounding in dark-coloured shells, and susceptible of a fine polish; so called as occurring in a forest in Oxfordshire.

**FOREST OAK.** An Australian timber.

**FOREST OF DEAN STONE.** Is found in the coal measures in Gloucester-

shire, in three distinct layers or beds of considerable thickness. The first and second beds are of a grey colour, the third is bluer, harder and of a finer grain, while some of it has a brownish tint.

**FORES VALVATE or VALVÆ.** Formerly applied to folding doors which opened in one height.

**FOREYN.** An ancient term signifying a drain or cesspool.

**FORGE.** A furnace in which iron or other metal is heated in order to be hammered into form; to form by heating and hammering.

**FORGE IRON or FORGE PIG.** A term applied to white pig-iron almost free from uncombined carbon; it is suitable for conversion into wrought iron.

**FORK.** The branch formed by the meeting of two roads or two rivers.

**FORKED HEADING JOINT.** A method of making the heading joint of a floor board, by having a number of V shaped grooves fitted into each other.

**FORM.** The external appearance or disposition of the surfaces of a body.

**FORMATION.** A group of strata connected together by community of age, origin or composition.

**FORMERET.** The arch rib which in Gothic groining lies next the wall; it is thus less than the other ribs which divide the vaulting.

**FORNICATION.** The forming of a vault; an arching.

**FORT.** A castle; a fortified place.

**FORTALICE.** A fortillage, or small outwork.

**FORTIFICATION.** The science of military architecture; a defensive building.

**FORTILAGE.** A little fort; a blockhouse.

**FORTLET.** A little fort.

**FORTRESS.** Any fortified place.

**FORUM.** In ancient architecture, a market place.

**FOSS or FOSSE.** A ditch or moat.

**FOSSATUM.** A ditch, or a place fenced with a ditch or trench.

**FOSSES d'AISANCES.** The cess-pools of Paris.

**Fossil.** A petrified plant or animal occurring in the strata of the earth's surface.

**Fossway.** One of the four Roman military highways of England, with a ditch on each side.

**Fother.** Same as Fodder, which see.

**Foul Clay.** In brickmaking, a "strong" clay containing little lime, magnesia, soda or other salts.

**Foul Drains.** A term sometimes used to imply that the drains convey "sewage" as distinguished from "storm water".

**Foul Water.** Generally synonymous with "sewage," but sometimes used to denote the waste from kitchens, yard gullies, etc., as distinguished from the discharge from water-closets.

**Foundation.** That part of a structure which rests on the ground; those parts of a structure below the base of the walls, and also for the supporting soil. Same as Footings, which see.

**Foundation Pile.** A pile driven into the soil to increase the supporting power under a foundation.

**Founder's Dust.** A powder ground fine for casting purposes.

**Founder's Sand.** A fine sand for making foundry moulds.

**Foundry.** The process of casting metals, or the works where metals are cast.

**Foundry Pig Iron.** The term applied to all pig-iron having grey fracture and a large proportion of uncombined carbon.

**Founds.** The Scotch term for footings.

**Fount.** A font; a fountain.

**Fountain.** A spring of water; an artificial spring of water; the structure connected with a basin kept supplied with running water.

**Foxtail Wedging.** In joinery, a method of sawing a series of cuts in the stump tenon of a rail and inserting small wedges; the rail is then driven into the mortise; the wedges coming in contact with the bottom of the mortise cause the tenon to spread in the form of a dovetail.

**Foxy or Foxiness.** A term applied to timber when disfigured by dull red or yellow stains caused by incipient decay; indicates growth in a marshy soil. These stains are generally round the heart of the tree.

**Fracted.** In heraldry, disjointed as if broken.

**Fragmentary Rocks.** Rocks formed of the fragments of other rocks, as conglomerates, sandstones, etc.

**Fraisi.** In fortifications, a defence consisting of pointed stakes driven into a rampart in a horizontal or inclined position.

**Frame or Framing.** A combination of timber firmly fixed together; the casing of anything, as a door frame, window frame, etc.

**Frame.** A kind of mould or ledge enclosing a board, which, being filled with wet sand, serves as a mould for castings.

**Frame Bridge.** A bridge so formed as to secure the greatest strength with a given quantity of material.

**Framed.** Any woodwork put together with mortises and tenons is said to be "framed".

**Framed and Braced Door.** A door framed with stiles, rails and braces, and filled in with match boarding.

**Framed Bead and Butt.** Consists of framing having bead and butt panels.

**Framed Bead and Flush.** Consists of framing having bead and flush panels.

**Framed Floor.** A name given to a floor used in large spans or where a good ceiling is required; it consists of girders, binders, bridging, and ceiling joists.

**Framed Ground.** Consists of a frame mortised, etc., together; chiefly used in superior work round door openings, etc.

**Framed Partition.** A trussed quarter partition, or a partition formed of wood framing and filled in with panels.

**Francis I. Style.** The early Renaissance architecture of France during part of the sixteenth century.

**FRANKFORT BLACK.** The best quality is made from vine twigs, the inferior qualities being made from other woods charred and reduced to a powder.

**FRANKING.** In window sashes, a method of making the joint where the vertical and horizontal bars meet; two tenons are used instead of one, or a smaller tenon is let into the square on the bar and a piece haunched out between the tenon and rebate for glass to fit on the piece left on the other bar.

**FRATER HOUSE.** The refectory or hall of a monastic establishment.

**FREDSTOLE.** A seat near the altar.

**FREE CHAPEL.** A chapel founded by the king, and not subject to the jurisdiction of the ordinary.

**FREE CHURCH.** Lately an ecclesiastical body in Scotland, which was founded by those who left the Established Church in 1843.

**FREING BEADS.** The beads formed on the elbows of the boxings of a window to allow the shutters to rise high enough to come on to the bead of the window sill.

**FREE MASON.** Originally one of an ancient and secret fraternity of masons or builders in stone.

**FREE STONE.** A description of stone that will not split into layers, but may be sawn or cut in any direction. It is composed of small grains, as of sand, firmly cemented together; the chief kind is oolite, a calcareous freestone whose grains resemble the eggs in the roe of a fish; any soft stone which can be worked easily with a mallet and chisel is usually termed "free-stone".

**FREE STUFF.** Clean stuff, or timber which works easily without tearing, and free from knots.

**FRENCH or DUTCH ARCH.** A common flat arch only used in inferior work across door and window openings, etc.

**FRENCH CASEMENTS.** Are windows made the full height of the opening (less the frame) hinged to the jambs, and when shut fastened by means of long bolts, etc.

**FRENCH DRAIN.** A trench partly filled with rough stone or broken brick to act as a subsoil drain.

**FRENCH FLIERS.** Fliers or flyers arranged round a rectangular well hole.

**FRENCH GREEN.** A pigment made from copper.

**FRENCH OAK.** Is similar to British oak in quality, colour, texture and general characteristics.

**FRENCH POLISH.** A solution generally made by dissolving shellac in spirits of wine without heat; it may be darkened by adding benzine or it may be coloured with various substances.

**FRENCH ROOFING TILES.** Are about nine inches square in form, with a raised ledge on two sides; they are laid diagonally, therefore the rain never hangs to the joints by capillary attraction but runs to the lower points and on to the surface of the next tile.

**FRENCH ULTRAMARINE BLUE** (*Guimets*). Is composed of kaolin, carbonate of soda, sulphur and charcoal.

**FRENCH WALL PAPER.** Varies considerably in length and breadth of the piece, according to quality, but it generally averages about nine yards long and eighteen inches wide.

**FREQUENTLY BROKEN.** This term in specifications refers to the heading joints of laths (in plasterer's work), which should be broken at about every sixth lath and must be butted, not lapped over each other.

**FRESCO.** A method of painting durably on walls with mineral and earthy colours on fresh plaster or on a wall laid with mortar not yet dry.

**FRET or FRETTE.** An ornament consisting of small fillets or narrow bands intersecting each other at right angles; used on the faces of the corona of cornices, soffits, etc.

**FRET LEAD.** The lead bars used for lead lights, "comes" or "calms," i.e., long strips of lead of H section.

**FRET LEADWORK.** Lead glazing done with irregular pieces of glass.

**FRETWORK.** In lead glazing, work of an intricate character, such as corner-pieces, borders, etc.

**FRIARY.** A monastery.

**FRICTION.** The resistance produced by the rubbing of the surfaces of two solid bodies against each other.

**FRICTION BALLS.** A mechanical contrivance for moving heavy weights round a centre, as in cutting a block of marble.

**FRICTION CLUTCH.** A method by which machinery is put in and out of gear.

**FRICTION WHEELS.** Wheels so arranged as to diminish the friction of machinery.

**FRIEZE.** That part of the entablature of a column which is between the architrave and cornice. Friezes are of various forms, usually flat, but sometimes convex, and in a few instances formed of two curves of a contrary flexure. In the Ionic order, modern architects sometimes use what is termed a "pulvinated frieze," *i.e.*, one whose face is curved convexly or round.

**FRIEZE.** A wallpaper about twenty-four inches wide (more or less) placed round the top part of the walls of a room; it is generally of an elaborate pattern.

**FRIEZE OF A CAPITAL.** Same as Hypotrachelium, which see.

**FRIEZE PANEL.** The upper panel in a six-panelled door.

**FRIEZE RAIL.** The narrow rail placed between the lock rail and the top rail of a door.

**FRIGIDARIUM.** The cold bathing room in the baths of the ancients; the word is sometimes used to denote the cold bath itself.

**FRIT.** The material of which glass is made after it has been calcined or baked in a furnace, but before fusion.

**FRITHSTOOL or FREEDSTOOL.** A seat or chair near the altar.

**FROG.** A small barrel-shaped silk ornament with tassels, used in the decoration of mantels, etc.

**FROG.** The rectangular sinking in a brick which forms a key for the mortar when the brick is laid or set.

**FRONT.** The face of an arch or that portion shown in elevation.

**FRONT.** Any side or face of a building; the entrance side or "front".

**FRONTAL.** A little pediment or front piece over a small door or window; a hanging or ornamental panel in front of an altar.

**FRONT HEARTH.** That part of a hearth resting upon the trimmer arch in front of a chimney breast. The "back hearth" covers the space between the jambs of the chimney breast.

**FRONTISPIECE.** The decorated entrance of a building; the face or forefront of a house; the principal front of a building.

**FRONTON.** The triangular ornament over the principal entrance of a building; the French term for pediment.

**FRONT PUTTIED.** Glass puttied from the front or moulded side of a sash; the removal of the superfluous back putty.

**FROSTED.** A species of rustic work, imitative of ice, formed by regular drops of water.

**FROWY STUFF.** Short or brittle and soft timber.

**FRUMSTALL.** A chief seat or mansion house.

**FRUSH.** Wood is said to be "frush" in the grain when, in consequence of the deceased lateral adhesion of the annual layers, it has become short and brittle, and has lost such elasticity and adhesiveness of fibre, which, in the ash, constitutes its peculiar excellence.

**FRUSTUM.** The part of a solid next the base formed by cutting off the top; the part of any solid, as of a cone, pyramid, etc., between two planes.

**FULCUM or FULCRUM.** The prop or support by which a lever is sustained.

**FULL CENTRED VAULT.** One formed by a semi-cylinder.

**FUMAGE.** A tax formerly on chimneys.

**FUMARIUM.** A chimney; an upper room used by the Romans for collecting the smoke from the lower apartments.

**FUNNEL.** That part of a chimney contained between the fireplace and the summit of the shaft.

**FUOR.** A piece nailed upon a rafter to strengthen it when decayed.

**FUR.** To nail small strips of wood on joists, rafters, etc., in order to make a level surface for lathing, boarding, etc. Same as Furring.

**FURLONG.** The eighth of a mile; forty poles.

**FURNACE.** Any enclosed fireplace in which to produce a violent heat.

**FURNITURE.** The visible brass-work of locks, knobs to doors, etc.; the articles themselves.

**FURROW DRAIN.** A deep open channel to carry off water.

**FUSAROLE.** A moulding generally

placed under the echinus or quarter round of columns in the Doric, Ionic and Corinthian orders; the shaft of a column, pilaster or pillar.

**FUSE.** See Cut Out.

**FUSIBILITY.** Is the property of becoming liquid when subject to heat. The temperature at which this is effected is called the "melting point".

**FUSIL.** In heraldry, a bearing of a rhomboidal figure, so named from its spindle-shaped form.

**FUST.** The shaft of a column or the trunk of a pilaster; the ridge of a roof.

**FYLFOT.** A kind of cross, often used in decoration and embroidery during the Middle Ages.

## G.

**G.** As a numeral, G was anciently used to denote four hundred, and with a dash over it forty thousand.

**GAB.** A hook on the eccentric which moves the steam valves.

**GABBART SCAFFOLDING** or **GABERS SCAFFOLDING.** A kind of scaffolding in which the standards are formed of deals or battens bolted together, the ledgers being inserted through a space left for them in the standard.


**GABRO.** A name given to the aggregate of diallage and felspar and sometimes with serpentine or mica.

**GABBRONITE.** A mineral, a variety of nepheline found in Norway.

**GABION.** A cylindrical basket of wicker or iron-work, filled with earth; used for riveting the interior slopes of fieldworks.

**GABLE.** The upright triangular end of a house, from the cornice or eaves to the top of the building or ridge.

**GABLED.** Having gables.

**GABLE-END.** A gable: 

**GABLE-ROOF.** A converging roof open to the sloping rafters.

**GABLETS.** Small ornamental gables or canopies formed over buttresses, niches, etc.

**GABLE-WINDOW.** A window in a gable.

**GAD.** A kind of iron wedge with a sharp point used for splitting stone; a wedge or ingot of steel or iron; a punch of iron with a wooden handle used by miners.

**GADLINGS.** Spikes of steel on the knuckles of gloves or mail.

**GAFF.** A theatre or music hall of the lowest class.

**GAGGER.** A lifter used by foundries, consisting of a light T shaped piece of iron.

**GAIN.** A mortise.

**GAIN.** The bevelled shoulder of a binding joist, used for the purpose of giving additional resistance to the tusk tenon below.

**GALENA.** Sulphide of lead.

**GALERITES.** A genus fossil of echinoderms, chiefly from chalk.

**GALILEE.** A porch or chapel at the entrance of a church; usually built near or at the west end of abbey churches.

**GALIPOT.** A white viscid resin found on fir trees (*Pinus maritimus*).

**GALIPOT VARNISH.** A strong varnish made by a commixture of galipot with powdered glass and Venice turpentine.

**GALLERY.** An upper floor with seats in a church or theatre; the covered part of a building, commonly

in the wings, used as an ambulatory ; a long apartment serving to communicate with others ; an ornamental walk or apartment in gardens formed by trees ; a corridor.

**GALLERY.** The three-armed support which holds the globe over a gas burner.

**GALLERY.** An adit or drift in a mine, as a means of working.

**GALLERY.** An oblong reverberatory furnace with a row of retorts.

**GALLETED.** Joints in rubble masonry made by "galleting".

**GALLETING.** A method of making the coarse joints of rubble masonry, in which small chips of flint, etc., are stuck into the mortar while soft, generally crossing the joint diagonally.

**GALLETS.** Small pieces of flints, etc., used for sticking in mortar joints when "galleting".

**GALLIUM.** A bright grey metal of extreme fusibility, discovered in zinc blende.

**GALL OAK.** The *Quercus insectoria*.

**GALLON.** An English measure of capacity, usually for liquids, containing four quarts.

**GALLOWS BRACKET.** One in which the diagonal strut is curved two ways or one of  $\nabla$  shape.

**GALVANIC BATTERY.** Any arrangement of galvanic pairs or cells to produce an electric current.

**GALVANIC PILE.** See Voltaic Pile.

**GALVANISED IRON.** Iron covered with a thin coating of zinc, with or without galvanic process, whereby it is rendered less liable to be acted upon by moisture.

**GALVANISM.** The department of electrical science which treats of currents of electricity as due to chemical action, especially that of acids on metals.

**GALVANOMETER.** An instrument for detecting the presence and ascertaining the force and direction of an electric current.

**GALVANOPLASTIC.** Pertaining to electrolytyping.

**GALVANOSCOPE.** An instrument to determine the presence and direction of an electric current.

**GAMBOGE.** A vegetable gum resin, much used as a yellow pigment, produced by a species of *garcinia* growing in Siam, Ceylon and parts of India ; it occurs in two forms, "pipe" and "cake". Gamboge consists principally of two constituents, a gum soluble in water, and a resin soluble in alcohol ; the latter being the true colouring matter.

**GAMBREL ROOF.** A roof curved or crooked like a horse's hind leg.

**GAMING HOUSE.** A house where gaming or gambling is carried on.

**GAMING TABLE.** A table appropriated to gaming.

**GAMMADION.** A cruciform ornament composed of four gammas, placed back to back, forming a void Greek cross.

**GANG.** A number of workmen under a "ganger".

**GANG BOARD.** A board or plank with cleats nailed across, as steps, to prevent slipping.

**GANG BOARDING.** Rough boarding forming a gangway inside a roof.

**GANGER.** The foreman or manager of a gang of excavators or labourers, or platelayers on a railway.

**GANGUE.** The impurities found in ores.

**GANGWAY.** A passage in the House of Commons running across the house, which separates the independent members from the supporters of the Government and the opposition ; a passage, generally temporary, into or out of any place.

**GANGWAY.** In mining, a main level.

**GANIL.** A kind of brittle limestone.

**GANISTER.** A refractory material used for lining the Bessemer converters

**GANISTER.** A sandstone obtained from the coal measures ; used in a powdered state in the manufacture of steel.

**GANTRY.** A kind of raised tramway formed by laying rails along the top of two parallel beams supported on two rows of standards.

**GARANCIN.** A colouring matter produced by the action of sulphuric acid upon madder.

**GARBE.** In heraldry, a sheaf of grain.

**GARDANT.** In heraldry, said of a beast full faced and looking right forward.

**GARDEN.** An enclosed piece of ground appropriated to the cultivation of fruit, flowers or vegetables.

**GARDEN HOUSE.** A summer-house.

**GARDEN MOULD.** Rich mellow earth.

**GARDEN PLOT.** A part of a garden laid out with flowers, etc.

**GARDEN WALL BOND or MODIFIED ENGLISH.** A term used in brickwork when three courses are stretchers and every fourth course headers.

**GARDEN WALL IN FLEMISH BOND.** Is when three courses are stretchers and every fourth course built in Flemish bond.

**GARDE VISURE.** In heraldry, a vizor.

**GARGOYLE.** A projecting ornamental spout of a roof gutter of a building frequently in the form of a human or other figure.

**GARLAND.** In carving, etc., a wreath or chaplet made of branches or flowers.

**GARNER.** A granary.

**GARNET.** A hinge now called "cross garnet".

**GARNET.** A precious stone of varying composition, colour and quality; the most valuable are prized as gems, the inferior kinds being used for polishing other stones.

**GARNISHED.** In heraldry, having an ornament attached.

**GARNITURE.** Furniture; ornamental appendages; embellishment.

**GARRET.** A room in a house on the upper floor immediately under the roof; a turret.

**GARRETED.** Furnished with garrets.

**GARRETING or GALLETING.** Chips of stone inserted in rough jointings.

**GARRISON.** A fort or fortified place manned with soldiers, guns, etc.

**GARRON.** A large wrought-iron nail with a flat point and a rose head.

**GARTER.** In heraldry, the badge of the highest order of British knighthood, instituted by Edward III. about 1348; the order itself; the principal king-at-arms; the half of a bend.

**GARTH.** The central space round which a cloister is raised.

**GAS.** An elastic fluid in the form of air; popularly that obtained from coal, and used for the purpose of lighting, etc.

**GASALIER or GASELIER.** A gas burning chandelier.

**GAS APPARATUS.** Apparatus for the manufacture or preparation of gas.

**GAS BRACKET.** A fixed or jointed horizontal gas pipe, more or less ornamental, supplied with a burner.

**GAS BURNER.** The jet fitted at the end of a gas pipe from which the flame issues.

**GAS CONDENSER.** An apparatus for purifying the gas from the tar by means of water.

**GAS ENGINE.** An engine in which gas is the motive power.

**GAS FITTER.** A workman who fits up pipes, burners, gasaliers, etc., for gas.

**GAS FIXTURES.** A gas bracket; a gasalier.

**GAS GAUGE.** A device to test gas pressure.

**GAS GOVERNOR.** A gas regulator.

**GAS HOLDER.** A gasometer.

**GASIFORM.** Having the form of gas.

**GASIFY.** To convert into gas.

**GAS JET.** A gas burner; a jet of flame from it.

**GASKET.** The plaited hemp used for packing the pistons of steam engines and pumps, also for inserting in the sockets of cast-iron pipes before running with lead.

**GAS LIGHT.** The light produced by the combustion of coal gas.

**GAS MAIN.** A principal pipe leading from the gas works, and having branches and distributing pipes.

**GAS METER or GASOMETER.** A machine attached to a gas works and pipes, to show the quantity of gas used; an instrument or appa-

**ratus** intended to measure, collect, preserve or mix different gases ; a reservoir of gas.

**GASOLINE.** A light grade of petroleum.

**GASOMETRY.** The science or practice of measuring gases.

**GASOSCOPE.** An apparatus for indicating the presence of gas in mines, buildings, etc.

**GAS REGULATOR.** An apparatus for equalising and regulating the flow of gas.

**GAS RETORT.** A vessel used for holding the material of which gas of any kind is to be made.

**GAS TAR.** The bituminous substance that distils over in the manufacture of coal gas.

**GASTROMANCY.** Among the ancients, a kind of divination by means of large bellied glasses.

**GAS WATER.** Water through which the common gas made at the gas works has passed.

**GAS WORKS.** A manufactory where coal gas is made.

**GATE.** A frame of timber, iron, etc., which opens or closes a passage ; the passage into a city, an enclosure or a large edifice ; the frame which stops the passage of water through a dam, loch, etc.

**GATE CATCH.** A contrivance fixed in the ground for keeping a gate open.

**GATE CLIP.** A staple forming the upper socket of an iron gate.

**GATE HOUSE.** A house at or over a gate.

**GATEMAN.** A lodge keeper ; the gate porter at a park lodge ; the attendant at a swing gate at a railway crossing.

**GATE STEP.** An iron block with a socket for securing the lower pivot of an iron gate.

**GATE STOP.** A contrivance of various forms sunk in the ground for stopping a gate at a certain point.

**GATEWAY.** The way through a gate ; a gate.

**GATE WITH BOW.** A swinging hand gate working in a semicircular bow or railing for admission of one person only at a time.

**GATHERING.** The contraction of an opening by corbelling the bricks over, as in a chimney just over the fireplace.

**GATHERING.** Is a fault in the use of distemper ; in different positions it appears to be of varying texture and thus looks rather patchy ; this defect chiefly arises from unequal suction.

**GATHERING OF THE WINGS** or **GATHERING.** That part of a chimney, or that part of the funnel or flue, which contracts as it ascends.

**GAUGE.** An instrument made to strike a line parallel to the straight side of a board ; in riveting, the distance apart of the rivets from centre to centre ; in slating or tiling the distance from one course to the next.

**GAUGE.** A measure ; a standard of measurement ; to ascertain the contents or capacity of ; the width between the rails on a line of railway, the narrow gauge being four feet eight and a half inches, and the broad gauge seven feet.

**GAUGE BOARD.** A platform made of boards used for mixing concrete, etc., on.

**GAUGED ARCH.** A brick arch in which the bricks are cut and rubbed to the required radial form.

**GAUGED BRICKWORK.** That built with bricks cut and rubbed to the exact size required, to ensure a fine joint ; used for arches, mouldings for cornices, architraves, etc.

**GAUGED STUFF.** In plastering, is composed of three quarters of plasterer's putty to one quarter of plaster of Paris ; it is used when the work is wanted to set very quickly.

**GAUGED WORK.** Plastering done with gauged stuff.

**GAUGE PILE.** See Guide Pile.

**GAUGING.** The science of measuring or ascertaining the contents of casks or vessels.

**GAUGING ROD.** An exciseman's measuring staff.

**GAUGING RULE.** A sliding rule with four faces ; used in "gauging".

**GAULT.** A series of beds of clay and marl lying between the upper and lower greensands.

**GAULT BRICKS.** Are generally white, but some of the inferior qualities have a pink tinge; they are made from a bed of clay which lies between the upper and lower green-sand formations; in its natural state it contains sufficient chalk to flux the mass and give the brick a white colour.

**GAZE, AT.** In heraldry, represented full faced, as a buck.

**GAZON.** In fortifications, pieces of turf used to line parapets and the faces of earthworks.

**GEAR.** Mechanical appliances; toothed wheels.

**GEAR CUTTER.** A machine for making cog wheels.

**GEARING.** A train of toothed wheels for transmitting motion.

**GEAR WHEEL.** A wheel with cogs.

**GEAT.** The hole through which molten metal descends into the mould.

**GEDACKT.** Applied to organ stops closed in at the top.

**GEEST.** Alluvial matter on the surface of land, not of recent origin.

**GELATINE.** Animal glutin, a jelly-like substance obtained by treating bones with dilute hydrochloric acid and boiling the residuum.

**GEOLOSE.** A vegetable isinglass prepared from seaweed

**GEMEL.** In heraldry, a pair of parallel bars.

**GEMEL WINDOW.** A window with two bays.

**GEMMELS.** A mediæval term for hinges.

**GEMS-HORN.** A tapering metal organ stop of very musical tone.

**GENERANT.** A point, line or surface conceived of, as by its motion, generating a line, surface or solid.

**GENERATING CURVE.** See Evolute.

**GENERATING LINE or PLANE.** In geometry, a line or plane which moves according to a given law, either round one of its extremities as a fixed point or axis, or parallel to itself in order to generate a plane figure or solid formed by the space it has gone over.

**GENERATING SURFACE.** The heating surface of a boiler, or that on which heat is applied to generate steam.

**GENERATOR.** A vessel in which steam, etc., is generated.

**GENERATRIX.** A point, line or surface which, by its motion, generates a line, surface or solid.

**GENESIS.** In geometry, the formation of a line or solid by the motion of a point, line or plane.

**GENEVA CROSS.** A red Greek cross on a white ground; the distinguishing mark of military ambulances, etc.

**GENOUILLÈRE.** In fortifications, the part of a parapet of a battery under the embrasure.

**GENOUILLÈRE.** The interior slope of the parapet below the sill of an embrasure; the height of the parapet above the banquette in a barbette battery.

**GENTESE.** In Early English architecture, cusps or featherings in the arch of a doorway.

**GEODE.** A hollow nodule of any mineral substance, often lined with crystals; the cavity in such a nodule.

**GEODESY.** The art of measuring and surveying land in which the curvature of the earth is taken into account.

**GEODETIC.** Pertaining to geodesy; carried out or determined by means of geodesy.

**GEOLOGY.** The science which inquires into the successive changes which have taken place in the organic and inorganic kingdoms of nature; the science which seeks out these changes and traces their influence in modifying the surface and the external appearance of the earth.

**GEOMETRICAL.** That relating to geometry.

**GEOMETRICAL LINE.** In perspective, any straight line in the geometrical or primary line.

**GEOMETRICALLY.** According to geometry.

**GEOMETRICAL PLANE.** In perspective, is a plane parallel to the horizon; it is usually at right angles with the perspective plane.

**GEOMETRICAL PROGRESSION.** A progression in which the terms increase or decrease by a common ratio, as 1, 3, 9, 27; 144, 72, 36, 18.

**GEOMETRICAL STAIR.** One in which there is an opening or well hole between the progressive and retrogressive flights, and no newels, but having a continuous handrail.

**GEOMETRICAL TRACERY.** That having figures, such as circles, trefoils, quatrefoils, which do not always regularly join each other but touch at points.

**GEOMETRIC ELEVATION.** A design for any part of a building drawn according to the rules of geometry, as opposed to perspective or natural elevation.

**GEOMETRICIAN.** One well versed in geometry.

**GEOMETRIC PEN.** An instrument for drawing curves.

**GEOMETRY.** That science which treats of the objects of figured space.

**GEONOMY.** The science of the physical laws relating to the earth.

**GEOPONICS.** The art or science of agriculture.

**GEORAMA.** A hollow globe on the inside of which the countries, oceans, etc., of the earth are represented to the spectators, who stand on a framework in the centre.

**GEORGE.** A figure of St. George on horseback engaging the dragon, worn pendent from the collar by Knights of the Garter.

**GEORGIAN.** Relating to the reigns of the Georges in Great Britain (1714-1830).

**GEOSTATIC ARCH.** Is an arch in equilibrium under the vertical pressure of an earth embankment.

**GEO THERMOMETER.** An instrument for ascertaining the degree of heat contained in the earth at different places, especially in artesian wells, mines, etc.

**GERMAN PLATE GLASS.** Sheet glass.

**GERMAN SILVER.** A white alloy consisting of nickel, copper and zinc.

**GERMAN STEEL.** A metal of pig or white plate iron in forges where charcoal is used for fuel.

**GERMAN ULTRAMARINE BLUE** (*Gahn's*). Consists of kaolin and cobalt oxide.

**GERMAN VERMILION.** Is a pigment made of the tersulphide of antimony; it is of an orange red colour.

**GET, GETTER.** The operation of loosening earth so that it can be lifted with a shovel is termed "getting," and the men using pick-axes or other tools for this purpose are called "getters".

**GHANT.** Stairs descending to a river.

**GHETTO.** That quarter of certain Italian towns in which Jews live.

**GIALLOLINO.** A fine yellow pigment much used under the name of Naples yellow.

**GIANT POWDER.** A form of dynamite consisting of infusorial earth saturated with nitro-glycerine.

**GIANT'S CAUSEWAY.** A vast collection of basaltic pillars in the north of Ireland.

**GIB.** The arm of a crane.

**GIBBET.** The post and arm of a crane.

**GIBLEA CHEQUE.** A Scotch term to denote the cutting away of the right angle formed by the front and returns of the aperture of a stone door frame, in the form of a rebate or reveal, so as to make the outer side of the door flush with the face of the wall.

**GIBLET CHEQUE.** A Scotch term for the rebate in a door frame into which the door closes.

**GIBS.** Pieces of iron employed to clasp the straps on heavy framework, such as roofs, etc.

**GIBS AND COTTERS.** Gibs used with "cotters" or wedges.

**GIB STAFF.** A long pole to gauge water or to shove a boat into deep water.

**GILD.** To overlay with gold; to colour with gold.

**GILDING.** The art or practice of overlaying with gold; that which is laid on; there are two kinds of gilding, *viz.*, burnished and dead. The former, after the gold leaf is laid on, is polished or well rubbed with an ivory burnisher, and the latter is left unburnished.

**GILDING METAL.** An alloy of copper, brass and tin.

**GILDING SIZE.** Same as Gold Size.

**GILL.** A measure; a fourth of a pint.

**GILLS.** Flat plates of iron secured to a stove for increasing the radiating surface.

**GILT.** Gilded; adorned with gold or something resembling gold; gilding.

**GIMBAL.** A form of universal joint for securing free motion in suspension, or for suspending anything, such as a lamp, compass, etc., so that it may always retain a certain position or be in equilibrium.

**GIMLET.** A small boring tool having a screw point, a grooved staff and a cross handle.

**GIN.** A machine of various kinds for driving piles, raising great weights, etc.; a pump worked by wheels.

**GINGING.** The lining of a shaft with bricks or masonry.

**GINNY CARRIAGE.** A strong railway car for conveying materials.

**GIRANDOLE.** A chandelier; a large kind of branched candlestick.

**GIRARD TURBINE.** The girard turbine is a parallel flow impulse motor, the power being due almost entirely to the velocity of the water.

**GIRDER.** A longitudinal beam of wood or iron in a floor which sustains the joists when the distance between the walls render it necessary to give them additional support; any large beam of wood or iron to support a weight.

**GIRDER BOWSTRING.** A girder with a curved upper flange.

**GIRDER BOX.** A girder built up of  $\square$  section.

**GIRDER BRACED.** A girder whose flanges are connected by diagonal bars.

**GIRDER LATTICE.** A girder whose flanges are connected by crossed diagonal bars.

**GIRDER PLATE.** A girder built up of wrought iron or steel plates.

**GIRDLE.** A circular band or fillet round the shaft of a column.

**GIRDLING.** A method of killing trees by cutting circles in the bark with an axe.

**GIRTH OR GIRT.** The total length of the cross section of a moulding or mouldings; the total length round the trunk of a tree or similar body.

**GISMONDITE.** A native silicate of lime found near Rome, and in Sicily, etc.

**GIVE.** To yield to pressure, as a floor beam, etc.

**GLACIAL DRIFT.** Drift transported or deposited by ice.

**GLACIAL PERIOD.** A period or epoch commencing during the newer pliocene and terminating before the close of the post pliocene, during which the climate in what are now temperate latitudes was polar.

**GLACIAL THEORY.** The accepted theory that the drift is due mainly to the action of ice.

**GLACIER MUD.** Boulder earth.

**GLACIS.** A sloping bank; in fortifications, the parapet of a covered way.

**GLAIR.** The white of an egg used as size or varnish; any similar viscous, transparent substance.

**GLANCE COAL.** Anthracite.

**GLANCESCENT.** Of a bluish or sea-green appearance.

**GLAND.** The pressing piece of a stuffing box of an engine. Same as Collar.

**GLASS.** A hard, brittle, transparent substance formed by fusing silicious matter with fixed alkalis.

**GLASS BENDER.** A workman who moulds glass into certain forms by heat.

**GLASS BLOWER.** One whose business is to blow and fashion glass.

**GLASS CASE.** A case or shallow box having a glass lid and frequently the sides of glass; a "show" case.

**GLASS CUTTING.** The process by which glass may be cut or ground into ornamental forms.

**GLASS FACED.** Faced with glass; reflecting like a mirror.

**GLASS FURNACE.** A furnace in which the materials for glass are melted.

**GLASS GRINDING.** Glass cutting and grinding the edges to a bevel.

**GLASS HOUSE.** A conservatory; a building where glass is made.

**GLASS MAKER'S SOAP.** Manganese; from its cleansing action in glass-making materials.

**GLASS METAL.** Glass in fusion in the pot.

**GLASS MOSAIC.** A mosaic of small shapes of coloured glass often representing a picture so perfectly as to deceive the eye.

**GLASS MOULD.** A metallic shaping box, in which glass is pressed or blown to form.

**GLASS PAINTING.** The art of painting or staining with colours on glass.

**GLASS PAPER AND GLASS CLOTH.** Are made respectively from paper and calico, and consist of a coating of ground glass attached to the paper or cloth by glue; used for obtaining a smooth surface on wood or for rubbing down painted work.

**GLASS PRESS.** A device to apply pressure to glass in a mould while in a plastic state.

**GLASS SHADE.** A cover of glass of various forms, placed over articles to protect them from dust, etc., or over gas jets, lamps, etc., to equalise the light.

**GLASS SLATE.** A piece of plate glass the size of a slate inserted in roofs to give light.

**GLASS SOAP.** The black oxide of manganese.

**GLASS STAINER.** One who follows the trade or occupation of glass staining.

**GLASS STAINING.** The art or process of colouring glass during the process of manufacture.

**GLASS TILE.** A tile made of glass, inserted in roofs to give light.

**GLASS-WARE.** Articles manufactured in glass.

**GLASS-WORK.** Glass manufacture; glass-ware.

**GLASS-WORKS.** A place, building or works where glass is manufactured.

**GLASSWORT.** A plant yielding much soda, and used in making glass.

**GLASTONBURY.** A town in Somersetshire; the seat of a celebrated abbey, now in ruins.

**GLAUBERITE.** A greyish-yellow mineral consisting of sulphate of soda and sulphate of lime.

**GLAUCOLITE.** A mineral of a lavender blue colour, a silicate of alumina and lime.

**GLAUCONITE.** An argillaceous marl sometimes containing a mixture of greensand.

**GLAUCOUS.** Of a sea-green colour.

**GLAZE.** To fix glass; the colour used for "graining".

**GLAZE KILN.** A kiln in which glazed biscuit-ware is placed for firing.

**GLAZER.** A workman who glazes earthenware.

**GLAZIER.** One whose business is to fix panes of glass in window frames, etc., making lead lights, etc.

**GLAZIER'S BRADS OR SPRIGS.** Have no heads and are generally used for securing large panes of glass.

**GLAZIER'S DIAMOND.** A small diamond fixed on a handle and used by glaziers for cutting glass.

**GLAZING.** In painting, semi-transparent colours passed thinly over other colours to modify their effect.

**GLAZING.** The colour used for graining; fixing glass in window frames, etc.; a thin vitreous coating given to pottery, as tiles, etc.

**GLEBE.** A piece of earth containing ore; the land belonging to a parish church or ecclesiastical benefice.

**GLEBE.** Land containing ore.

**GLEBE HOUSE.** A parsonage house.

**GLIMMER.** Mica.

**GLOBE.** A ball; a sphere; anything of a globular or nearly globular shape, as a lamp glass or gas shade.

**GLOBULAR.** Having the form or shape of a small globe or sphere.

**GLOBULAR PROJECTION.** A kind of projection in which the eye is supposed to look from a point distant from the globe half the chord of an arc of 90°.

**GLORY.** A circle of rays surrounding the person of saints, etc.

**GLOSS.** The brightness or lustre from a polished surface.

**GLOSSOLOGY.** The definition of technical terms.

**GLOW.** To shine with intense heat; to be incandescent.

**GLOW LAMP.** An apparatus by which electricity is converted to light with practically no combustion of conductor. Its candle power is from eight to two thousand, the usual size being sixteen. It is often called the incandescent lamp.

**GLUE.** A tenacious substance made from waste pieces of skins, horns, hoofs and other animal offal; these are steeped, washed, boiled, strained, melted, reboiled and cast into thin cakes which are then dried. Good glue should be of a strong dark colour, free from black or cloudy spots, hard in the cake and with little or no smell.

**GLUED AND BLOCKED.** In joinery, anything glued and strengthened with blocks.

**GLUED AND BLOCKED JOINT.** Is when two boards at right angles to each other have (in addition to the joint being glued) small blocks glued in the angle to strengthen the joint.

**GLYPH.** A fluting cut as an ornament, chiefly in the Doric frieze; a channel, usually one of the channels of a triglyph; a sunken channel, the term being usually applied to a vertical one.

**GLYPHIC.** Pertaining to carving or sculpture; a hieroglyphic.

**GLYPTICS.** The art of engraving on gems.

**GLYPTOTHECA.** A building or room for the preservation of works of sculpture.

**GNARL.** An outside knot in wood.

**GNEISS.** A species of rock, arranged in layers and composed of quartz, feldspar and mica.

**GNOMOMETRICAL.** A term used in the measurement of angles; also applied to telescopes and microscopes; used for ascertaining the inclination of strata or measuring angles of crystals by reflection.

**GNOMON.** A rod, style or pillar erected perpendicularly to the hori-

zon, from the shadow of which the altitudes, declinations, etc., of the sun and stars may be determined.

**GNOMON.** The style or pin which, by its shadow on the dial plate, shows the hour; the index of the hour circle of a globe.

**GNOMON.** The figure made up of the two complements of a parallelogram together with either of the parallelograms about the diameter.

**GNOMON.** In dialling, the style, pin or cock of a dial, the shadow of which points the hour.

**GNOMON.** An instrument for measuring shadows; the part of a parallelogram which remains when one of the parallelograms about its diagonal is removed.

**GNOMONIC PROJECTION.** The projection of the lines of a sphere from the centre.

**GNOMONICS.** The art or science of dialling.

**GOAF.** The waste place in a colliery; waste refuse.

**GOAT-FOOT.** A satyr; a faun.

**GOBBETS.** Stones; a measure or quantity; so called in the reign of Edward III.

**GOBBING.** Refuse thrown back into the excavations after the removal of the coal.

**GOBELIN.** A rich French tapestry.

**GOBONATED.** In heraldry, divided into equal parts (used of a charge).

**GODOWN.** A warehouse or store-room.

**GODROOM or GADROON.** An ornamented moulding, consisting of beadings or cablings.

**GOD'S-ACRE.** A burial ground.

**GOING OF A FLIGHT.** The distance from the first riser to the last riser in a flight of stairs.

**GOING OF A STAIR.** The distance from riser to riser; also applied to the width of stair, or length of steps or treads.

**GOLA.** The Italian term for cyma.

**GOLD.** A metal of a bright yellow colour, the most valuable, ductile, malleable, and, except platina, the heaviest of all the metals.

**GOLD BEATER.** One whose occupation is to beat or foliate gold for gilding.

**GOLD BEATER'S SKIN.** A membrane prepared from the large intestine of an ox, which gold beaters lay between the leaves of the metal while they beat it.

**GOLD BEATING.** The reducing of gold to extremely thin leaves by beating with a hammer.

**GOLD CLOTH.** Cloth interwoven with gold thread.

**GOLDEN AGE.** A fabled primeval period of perfect human happiness and innocence, in which the earth yielded her fruits without toil, and all creatures lived in peace.

**GOLDEN FLEECE.** In heraldry, an order of knighthood instituted in 1429 and now common to Spain and Austria.

**GOLD FOIL.** A thin sheet of gold used by dentists and others.

**GOLD LEAF.** Consists of gold beaten to the thickness of tissue paper; it is classed according to thickness as singles, doubles or trebles, sold in books containing twenty-five pieces three and a quarter inches square, which are placed between the leaves of the book, which are rubbed with red chalk to prevent the gold from adhering to the leaves of the book. Common gold leaf is not more than a two hundred thousandth part of an inch in thickness. Five grains may be beaten out so as to cover a surface of more than 270 square inches.

**GOLD PLATE.** Vessels, dishes, etc., of gold.

**GOLD SIZE.** A kind of varnish applied to surfaces to be gilded, to form a basis to receive and secure the gold leaf.

**GOLDSMITH.** A worker in gold; a dealer in gold plate.

**GOLDSMITHRY.** Goldsmith's work.

**GOLD THREAD.** A flattened silver gilt wire laid over a thread of silk.

**GOLD WIRE.** Gold reduced to the form of wire.

**GOMER.** A Hebrew measure.

**GONG.** An instrument which, when struck with a padded stick,

emits a loud sonorous sound; it has replaced the dinner bell in many English houses.

**GONGE.** A chisel with a curved blade; used to cut circular holes, grooves, etc.

**GONGE SLIPS.** A hone for sharpening gonges.

**GONIOMETER.** An instrument for measuring solid angles.

**GONIOMETRY.** The art or science of measuring solid angles.

**GOOD SHEET ZINC.** That which is uniform in colour; it should stand bending backwards and forwards without cracking.

**GOODS TRAIN.** A train for conveying merchandise only.

**GOODS TRUCK.** A truck for goods.

**GOPHER.** The wood of which Noah's ark was directed to be made.

**GORE.** In heraldry, a gore-shaped abatement, denoting cowardice.

**GORE.** A hollow moulding; the entrance into a bastion or other outwork.

**GORGE.** A concave moulding or cavetto.

**GORGE.** In fortifications, the entrance into the bastion or other outwork.

**GORGED.** In heraldry, bearing a crown or the like about the neck.

**GORGONEIA.** Keystones carved with gorgons' heads; masks carved in imitation of the gorgon Medusa's head.

**GOSSAN.** An oxide of iron and quartz which frequently occurs in mineral lodes at shallow depths.

**GOTHIC.** Pertaining to the Goths; the Gothic style of architecture; the language of the Goths.

**GOTHIC.** A style of architecture with high and sharply pointed arches, clustered columns, etc.

**GOTHIC ARCH.** A pointed arch, or one composed of two segments of circles meeting at an angle at the top.

**GOTTENBURG WHITE DEALS.** Are hard and stringy; only used for rough work.

**GOUFING.** A Scotch term for "underpinning".

**GOUFING FOUNDATIONS.** A Scotch term for a mode of securing unsound

walls by driving wedges or pins under their foundations.

**GOVERNOR.** A pair of heavy balls connected with machinery, and designed to equalise the speed of steam engines by operating on the throttle valve of the engine.

**GOVERNOR.** A contrivance for reducing the pressure of gas, not allowing more to pass than is necessary for consumption.

**GOWAN.** Decomposed granite; the term is also applied to the solid rock.

**GOZZAN.** Oxide of iron and quartz.

**GRAB.** A tool used in large excavations; they are of various forms.

**GRADATION.** In painting, regular arrangement, as in the gradual blending of one tint into another.

**GRADATORY.** Steps from the cloisters into a church.

**GRADE.** Degree of slope in a road; to adjust the rate of slope in a road.

**GRADE.** The slope of a roadway; usually expressed by stating the ratio of the rise to the horizontal distance.

**GRADETTI.** The same as Annulets.

**GRADIENT.** The inclination, fall or slope given to the surface of a road or railway; the degree of ascent or descent.

**GRADIN.** A tier of seats; a toothed chisel used by sculptors.

**GRADUATE.** To mark with degrees or a scale.

**GRADUATION.** Regular progression by succession of degrees; a division into degrees or parts; the conferring or receiving of academical degrees; the reduction of a liquid to a certain consistency by evaporation.

**GRADUATION.** The division of circular arcs into degrees, minutes, etc.

**GRADUATOR.** An instrument for dividing lines into small regular intervals.

**GRÆCOSTASIS.** A hall or portico adjoining the Roman comitia.

**GRAFF.** A ditch or trench.

**GRAFFITI.** Ancient inscriptions, made by scribbling with a stylus on a wall.

**GRAFTING TOOL.** A kind of narrow spade used for digging clay.

**GRAILE.** Sand or gravel.

**GRAIN.** In wood or stone, the line of direction in which either may be split transversely; the vein or fibres of wood or other substances; "against the grain" is against the natural inclination of the grain.

**GRAIN.** Of stone, in the direction of the laminae or layers.

**GRAINAGE.** An ancient duty in London, consisting of the twentieth part of the salt imported by aliens.

**GRAIN COLOURS.** Dyes from cochineal.

**GRAINED.** Rough, made less smooth; painted or coloured like the grain of wood.

**GRAINER.** A painter who paints in imitation of the grain of wood.

**GRAINING.** A method of painting in imitation of some expensive wood or marble.

**GRAIN TIN.** Tin melted with charcoal.

**GRAMILE.** A little grain; a small particle.

**GRAMMAR SCHOOL.** A school in which the classics are taught.

**GRAMME.** The French standard unit of weight equal to 15.443 grains troy.

**GRANARY.** A storehouse for grain.

**GRAND STAND.** The principal stand, usually of wood, at a race-course, football ground, etc.

**GRANGE.** A monastic farm with the buildings, etc.

**GRANGER.** A farm bailiff.

**GRANILITE.** A granite composed of more than three ingredients.

**GRANITE.** Of which there are several varieties, is a stone found both red and grey in colour; the former is the hardest. Scotch granite is considered the most durable. Granite is composed of quartz, feldspar and mica confusedly crystallised together; it takes a very fine polish.

**GRANITIC PAINT.** Is a paint more durable and cheaper than lead paints, and is said to be proof against wet, heat or frost; well adapted for painting or making joints in iron work.

**GRANITINE.** An aggregate of three species of minerals, differing in some of its constituents from granite.

**GRANT.** A conveyance in writing; the thing conveyed.

**GRANT'S BLACK OR BIDEFORD BLACK.** Is a mineral substance found near Bideford; it contains a large proportion of silicious matter; it has not much staining power; it is denser than lampblack.

**GRANULAR.** Composed of or resembling granules.

**GRANULAR LIMESTONE.** A limestone generally found in the primitive rocks, the white variety being used as a statuary marble.

**GRANULATED CORK PAINT.** Is applied over paint to protect and roughen surfaces upon which the condensed moisture is likely to deposit, such as asphalt floors, paved ceilings, etc. The composition used for asphalt floors is composed of four parts of Venetian red and one part of red lead, mixed into a stiff paste with Stockholm tar, and laid on the surface of the asphalt about one-eighth inch thick; the granulated cork is then sprinkled over the paint to a depth of three-eighths inch and pressed in with a hand float; when dry the loose cork is brushed off.

**GRANULATION.** The art of forming into granules; the process of rendering a metal granular by pouring it in a melted state through an iron cullender into water.

**GRAPERY.** A building or enclosure for the rearing of grapes.

**GRAPHIC FORMULA.** A formula representing the relations of the atoms of a molecule to each other.

**GRAPHIC GRANITE.** Is composed of long parallel prisms of quartz and felspar; it contains very little mica; it is not often used for building; pegmatite.

**GRAPHITE.** Black-lead; plumbago; a scratched figure or rude inscription.

**GRAPHIUM.** A stylus.

**GRAPHOMETER.** A mathematical instrument for measuring the degrees of an angle.

**GRAPHOTYPE.** A chemical process for obtaining blocks for surface printing without engraving.

**GRASSLAND.** Land kept under grass

**GRASSPLOT.** A plot covered with grass.

**GRATE.** A frame of iron bars for holding fuel for a fire; a frame composed of parallel or cross bars with interstices.

**GRATICULATION.** The division of a design or draught into squares for the purpose of reducing or enlarging it.

**GRATING.** A partition of bars; lattice work; a perforated disc of iron or brass fixed over the outlet from a bath, sink, etc.; a grating made of wood battens used in a bathroom, etc., to keep the feet from the floor.

**GRAUNGE OR GRANGE.** A granary or farm belonging to a religious house.

**GRAVE.** To carve or cut on stone or other hard substance with a chisel or edged tool.

**GRAVEL.** Small stones, often intermixed with particles of sand, etc.

**GRAVELLING.** A covering with gravel; gravel.

**GRAVEL PLANK.** A horizontal board placed on its edge upon the ground at the bottom of a pale fence.

**GRAVER.** An instrument for turning iron after it has been roughed out by the "heel tool"; a square piece of steel fixed in a handle and bevelled diagonally at the end; the burin of an engraver.

**GRAVE STONE.** A stone generally worked into some monumental form and laid or erected over or near a grave.

**GRAVEYARD.** A burial ground.

**GRAVITATION.** The force which bodies attract and tend to each other.

**GRAVITY.** Is that power or force which causes bodies to approach each other; that force wherewith a body endeavours to descend towards the centre of the earth; this is termed "absolute gravity" when the body tends downwards in free space. Relative gravity is the force it endeavours to descend with in a

fluid. Terrestrial gravity is that force by which bodies are urged towards the centre of the earth. See Specific Gravity.

**GRAY-STONE.** A greyish rock, sometimes of a greenish tint; composed of felspar and augite and allied to basalt.

**GRAYWACKE.** A gritty kind of sandstone; a coarse slate; in geology, a secondary rock.

**GREASE TRAP.** A contrivance in a drain trap for catching the grease contained in water discharged from sinks, etc.

**GREAT HUNDRED OF TIMBER.** Contains 120 deals.

**GREE, GREES, GRESE or GRYSE.** Old terms signifying a step, steps or degrees.

**GREEK CHURCH.** The Eastern Church which separated from Rome in the ninth century.

**GREEK CROSS.** One in which the two branches are of equal length.

**GREEK ORDERS.** The Doric, Ionic and the Corinthian orders.

**GREEK TILE.** A kind of ornamental tile fixed on edge, usually in a row along the eaves of a roof; also called "antefixa".

**GREEN.** A colour composed of blue and yellow.

**GREEN.** Damp and newly made, applied to sand moulds.

**GREEN or WET TIMBER.** That newly felled, when it only equals about half the strength of dry timber.

**GREENHEART** (*Nectandra rodiaei*). A timber of a dark green colour but turns black with age; it is found in the north-east of S. America; it is the strongest we have and is largely used for dock gates and where extraordinary wear or strength is required; it is clean and straight in grain, very hard and heavy, imported in roughly hewn logs from twelve to twenty-four inches square, and up to fifty feet in length.

**GREENHOUSE.** A conservatory in which tender plants are sheltered from the weather and preserved during winter.

**GREEN ROOM.** A room near the stage, to which actors retire during the interval of their parts in a play.

**GREEN-SAND.** A silicious stone spotted green, in some cases with silicate of iron.

**GREENSTONE TRAP or WINSTONE.** Is a mixture of felspar and hornblende; it varies in colour from a greenish tint to black; chiefly used for paving setts and road metal.

**GREEN VERDITER.** Is a pigment produced from a carbonate of copper and lime.

**GREEN VITRIOL.** Copperas or green sulphate of iron.

**GREENWOOD.** A wood in summer when the trees, etc., are green; a wood which has become green in tint under the influence of the fungus peziza.

**GREENWOOD.** Wood when green as in summer.

**GREES.** Steps; also a staircase.

**GRENADE.** A hollow glass shell filled with a chemical for extinguishing fire.

**GREY.** A colour between white and black.

**GREY CAST IRON.** Cast iron of a grey colour owing to the presence of free carbon; made from foundry pigs of three qualities; it is itself divided into three qualities according to the nature of the pig from which it is obtained.

**GREY LIME or GREY STONE LIME.** A term applied to lime prepared from the grey chalk.

**GREY STOCK BRICKS.** Are good ordinary hard burnt bricks not quite perfect in shape and slightly irregular in colour; they are used for ordinary brick walling.

**GREYWACKE.** A sandstone usually consisting of small fragments of quartz, flinty slate, etc., cemented by argillaceous matter.

**GREYWEATHERS.** Large boulders of silicious sandstone.

**GRIDDLE.** A wire-bottomed sieve.

**GRIDELIN.** A colour mixed of white and red, or a grey-violet.

**GRIDIRON SYSTEM.** In agricultural drainage, the arrangement of "minors" in parallel straight lines; somewhat similar in plan to the shape of the household "gridiron".

**GRIFFITH'S SILICATE ENAMEL PAINT.** Is supplied ready for use ; prevents the corrosion or oxidation of metal ; forms hard enamelled surfaces, proof against penetration of damp, dries rapidly, requires no varnish, is not injured by hot or cold water, soap, fumes, gases or dilute acid ; one coat is sufficient for waterproofing, but two or more are required to produce a highly glazed surface.

**GRIFFITH'S WHITE.** Is an oxy-sulphide of zinc manufactured from sulphate of zinc and sulphide of barium, non-poisonous, more economical, more durable, and superior in covering power to white lead.

**GRIFFON.** A fabulous animal of antiquity. Represented in symbol of strength, with body and legs of a lion ; in symbol of swiftness with wings and the beak of an eagle, and in symbol of watchfulness with a pair of listening ears ; sometimes imitated in carvings, etc.

**GRILLAGE.** An arrangement of sleepers or cross beams, bedded in loose soil, as a support for erections ; a kind of platform or timber grating used in foundations ; a series of heavy timber piles are driven firmly into the soil and another series laid transversely on the top of them and fastened together by means of spikes, etc. ; a flooring of thick planks laid on the top of the grillage to receive the masonry is termed a platform.

**GRILLE.** An iron grating or grid usually fixed over openings.

**GRINDING STONE.** A flat stone, generally of marble, used with a muller by painters, for grinding colours or pigments on.

**GRINDSTONE.** A flat, circular stone mounted on a spindle ; used for grinding tools.

**GRINNING JOINTS.** A term sometimes applied to joints that have shrunk or opened, thus showing a crack.

**GRIP.** A brake applied to the wheel of a crane or derrick.

**GRIP or GRIPE.** A small ditch or furrow ; to trench ; to drain ; a lever which can be pressed upon a

wheel to retard or stop its motion ; a handle.

**GRISAILLE.** In painting, grey tints to represent solid bodies in relief.

**GRISE.** A step ; stairs.

**GRIT.** A strong, hard, coarse-grained, gritty sandstone ; rough-hard particles.

**GRITSTONE.** A gritty sandstone.

**GRIZZLE.** Grey ; a mixture of grey and black ; a badly burnt and misshapen stock brick ; used for inferior work.

**GROIN.** To form into groins ; to furnish with groins ; a kind of breakwater to check the action of the waves.

**GROIN.** The line of intersection where two vaults cross each other ; the angular curve made by the intersection of two arches.


**GROINED.** Having an angular curve made by the intersection of two arches.

**GROINED AND CLOISTERED ARCHES.** Are those formed by the intersection of two or more cylindrical arches.

**GROINED CEILING.** One formed by three or more curved surfaces, so that every two may form a groin, all the groins terminating at one extremity in a common point.

**GROINS.** The intersections of vaulting surfaces.

**GROINS.** In coast engineering, is a frame of wood, constructed across a beach between high and low water mark, to retain or recover the shingle.

**GROOVE.** A sunken rectangular channel of this section,  ; generally called a plough groove in joinery.

**GROOVED.** Having a groove.

**GROOVED AND TONGUED JOINT.** A joint having a projecting tongue on the edge of one board which fits into a groove in the other board, or both boards may be grooved and a loose tongue slipped in.

**GROOVED GROUNDS.** Those having the edge next the plastering grooved to form a key for the plaster.

**GROOVED PANEL.** A flush panel having a groove round the outer edges.

**GROSS POLES.** Are from thirty to forty-five feet in length; used for scaffolding, telegraph posts, and for cutting up for mine props.

**GROSSULAR.** A variety of garnet.

**GROTESQUE.** Whimsically designed carving, ornamentation, etc., composed of figures, plants and animals of fanciful invention.

**GROTTO.** A cavern or cave in the earth whether natural or artificial. In some public houses in the north of England the cellars of the establishments have been turned into grottos.

**GROTTOWORK.** Ornamental work, as in a grotto, or rockery work in a garden.

**GROUND.** In painting, that which is first put on the surface on which a figure or object—as stencilling—is represented; the principal colour to which others are considered as ornamental.

**GROUND.** The surface of a floor or apartment; land; foundation.

**GROUND or GROUNDS.** The ornamental land attached to a house; strata containing the mineral lode or coal seam; the flat surface from which figures rise.

**GROUND AIR.** The air filling the interstices of the soil down to the ground water level.

**GROUND ASH.** A sapling of ash.

**GROUND COCK.** A Scotch term for an ordinary stop or bib-cock.

**GROUND FLOOR.** The basement floor of a house.

**GROUND GLASS or OBSCURED GLASS.** Has one side covered with an opaque film, formed by melting powdered glass upon it or by grinding the surface.

**GROUND JOISTS.** Those used in basement or ground floors, which rest upon sleepers laid upon the ground, on bricks, prop stones or dwarf walls.

**GROUND LINE.** In perspective, the intersection of the drawing with the ground plane; the building line.

**GROUND NICHE.** One whose base or seat is on a level with the ground floor.

**GROUND OAK.** A sapling of oak.

**GROUND PLAN.** The plan of the ground floor or storey of a building in a horizontal section, level with the surface of the ground, or a few steps above it. The basement plan is beneath it if the building is provided with a basement or cellars.

**GROUND PLANE.** The situation of the original plane in the supposed level of the horizon.

**GROUND PLATE or SILL.** The lowest plate or sill of a wooden building, for supporting the principal and other posts.

**GROUND PLOT.** The ground in which a building is placed; the plan of the walls of a building where they first commence above the foundations.

**GROUND RENT.** The rent paid for the privilege of building on another man's ground.

**GROUND ROOM.** A room on the ground floor.

**GROUNDS.** Are pieces of wood nailed to plugs, wood bricks, etc., concealed in a wall and having their surfaces flush with the plaster; used for fixing facings, such as architraves, skirting, match boarding, etc.

**GROUND TABLE.** The projecting course of stones or bricks in a wall above the ground; generally called the plinth.

**GROUND TIER.** The lower range of boxes in a theatre.

**GROUND WATER.** The water saturating an underground stratum.

**GROUND WORK.** The first stratum; that which forms the foundation or basis.

**GROUND WORK.** The work which forms the foundation of anything.

**GROUP.** The union of several figures or objects placed in contact with each other to form a single mass; a number of minerals essentially agreeing in their chemical composition; a series of rocks or strata deposited about the same period.

**GROUP.** An assemblage of shafts or mouldings or other small features, intended to produce a combined effect.

**GROUPED COLUMNS or PILASTERS.** Three, four or more columns or pilasters placed upon the same pedestal.

**GROUPED JOINTS.** Consist of several iron plates with butt joints made so that they can be covered by one pair of "fish plates".

**GROUPING.** Combining architectural features in a "group".

**GROUPING.** The combining of the subjects of a picture, sculpture, buildings or mouldings, etc.

**GROUT.** A thin coarse mortar for pouring into the joints of masonry and brickwork; a finer material for finishing the best ceilings.

**GROUTING.** The method or process of filling in or finishing with "grout"; the "grout" thus filled in.

**GROVE.** A small wood; a cluster of trees shading an avenue or walk.

**GROWING SHORE.** See Dead Shore.

**GROYNE.** In coast engineering a low wall of wood piles, stone, concrete, constructed across a beach to prevent scour and retain shingle.

**GRUBBER.** An instrument or tool to pull up shrubs, etc.; a machine to pull up stumps and roots of trees, bushes, etc.

**GRUBBING AXE or GRUBBING HOE.** A tool or hoe for grubbing up stones or roots.

**GRUBB STONE MORTAR.** See Béton.

**GRUP-UP, GRUBBING-UP.** To dig up roots of trees, shrubs, rocks, etc.

**GUAIACUM.** *Lignum vite.*

**GUANO.** A valuable manure composed chiefly of the excrement of sea-fowl; brought from the South American and African coasts.

**GUARANTEE.** An engagement on the part of a third person to see an agreement or contract fulfilled; the act of guaranteeing the performance of any engagement; one who becomes surety for the performance of certain acts by another.

**GUARD.** An ornamental edging or border.

**GUARD BEADS.** The "stop" beads in a sash frame.

**GUARD HOUSE.** A house for those on military guard.

**GUARDIANS OF THE POOR.** Persons elected by the ratepayers to manage workhouses and unions, and to superintend the relief of the poor generally.

**GUARD ROOM.** A room for a guard; a room where military offenders are confined.

**GUARDS.** A wire netting fixed outside windows to protect from stones, etc., a wire cage of circular form fixed on the top of vent pipes.

**GUDGEON.** The metallic journal piece let into the end of a wooden shaft; the bearing portion of a shaft.

**GUELS.** In heraldry, a red colour, represented on an engraved escutcheon by vertical lines.

**GUERITE.** In fortifications, a small loop-holed tower, generally on the point of a bastion, to hold a sentinel.

**GUERNSEY GRANITE (Syenite).** Is a hard, durable and good weathering stone; used for paving, but has a tendency to become slippery.

**GUHR.** A loose earthy deposit in the cavities of rocks.

**GUIDE BLOCKS.** Pieces of metal on which the cross head of a steam engine slides, keeping it parallel to the cylinder.

**GUIDE PILE.** A pile driven as a guide for the after insertion of sheet piling.

**GUILD HALL.** A town hall; the hall where a corporation usually assembles.

**GUILLOCHE.** An ornament of bands twisting over each other in a continued series.

**GUISMUYDA FIREBRICKS.** Are similar to the Dinas firebrick, and are made near Swansea.

**GULF.** A large deposit of ore in a lode.

**GULLET.** A deep hollow between two teeth on a large saw, as a circular saw.

**GULLY.** An iron tram plate or rail.

**GULLY HOLE or GULLY.** An opening where gutters empty their contents into the subterranean sewer.

**GULLY TRAP.** A trap used in drainage work; formed with a grating to receive the discharge from rain-water pipes, etc.

**GULPHIC ORDER.** In heraldry, an order of knighthood instituted for Hanover in 1815.

**GUM ANIME.** Produces a quick drying varnish which is apt to crack, the colour deepening by exposure; imported from the East Indies.

**GUM ARABIC.** A gum obtained from several species of acacia growing in Egypt and Arabia.

**GUM DAMMAR.** Produces a softer varnish than mastic, and has a nearly colourless tint; it is extracted from the kaurie pine of New Zealand; also obtained from India.

**GUM ELEMI.** Is obtained from the West Indies, and somewhat resembles copal.

**GUM RESINS.** Those which are partly soluble in water, the remainder being soluble in alcohol.

**GUN METAL.** An alloy of copper and tin; generally used for pump valves and parts of machinery.

**GUNSTOCK SHOULDER.** The term applied to a bevelled shoulder, such as on the lock rail of a sash door, the styles being generally termed "gunstock styles".

**GUNTER'S CHAIN.** A chain used for measuring land; the length of the chain is sixty-six feet, or twenty-two yards; it is divided into 100 links of 7·92 inches each.

**GUNTER'S SCALE.** A large plane scale having various lines of numbers engraved on it, by means of which questions in practical geometry and arithmetic are resolved with the aid of compasses.

**GURGOYLE.** See Gargoyle.

**GURRY.** A wall flanked with towers; a small fort.

**GUSSET.** In heraldry, same as Gore, which see.

**GUTTA or GUTTÆ.** A small ornament resembling a drop; used in the Doric entablature.

**GUTTA PERCHA.** The inspissated juice of *Isonandra gutta*, the gutta-percha tree, growing in the Malayan Archipelago.

**GUTTE.** In heraldry, a drop.

**GUTTEE.** In heraldry, sprinkled with drops.

**GUTTER.** A channel for conveying away water.

**GUTTER BEARER.** A bearer for supporting gutter boards.

**GUTTER BOARDS.** The boards on which the lead is laid in a lead gutter.

**GUTTERING.** A gutter or arrangement of gutters; the act of forming into gutters.

**GUTTER PLATE.** A horizontal beam beneath a lead gutter in a roof.

**GUY.** A rope attached to anything to steady it, as the pole in using a pair of shear legs.

**GYN.** A three-legged support for a pulley for hoisting.

**GYNÆCEUM.** In ancient architecture, that portion of the Grecian house set apart for the occupation of the female part of the family; the nursery.

**GYPSOPLAST.** A cast taken in plaster of Paris or white lime.

**GYPSUM or PLASTER OF PARIS.** Is a granular sulphate of lime; it contains 26·5 of lime, 37·5 of sulphuric acid and 17 of water; slakes without swelling, sets hard in a short time; chiefly used for internal work. Being subjected to a moderate heat, to expel the water of crystallisation, it forms plaster of Paris.

**GYRE.** A circle described by a moving body.

## H.

**H.** As a numeral in Latin, H denotes two hundred, and with a dash over it two hundred thousand.

**H.** On a lead pencil, denotes a hard pencil for sketching.

**H.H.** Denotes harder, for outlines.

**H.H.H.** Denotes very hard, for architects.

**H.H.H.H.** Denotes extra hard, for engineers.

**H HINGE.** A hinge shaped thus, **H**, the horizontal piece forming the joint. An **HL** hinge is one shaped thus, **HL**, the horizontal piece forming the joint as an **H** hinge; used in common work, when the stuff is too thin to admit of butts being screwed on to its edge, or when it is desirable to strengthen the points of connection between the rails and the hanging style; chiefly used on batten doors.

**H STANDARD.** An iron standard, of **H** section, used in iron fencing.

**HAARLEM BLUE.** A pigment similar to Antwerp blue.

**HACHURE.** Short lines employed to represent half tints and shadows; to cover or mark with "hachures".

**HACIENDA.** An estate; an isolated farm; an establishment in the country for stock raising.

**HACK.** A pile of bricks for drying.

**HACK.** A break in the horizontal joints of irregularly coursed rubble walling, on account of a variation in the height of the stones.

**HACK.** To roughen a wall by scoring it with a pointed hammer, or similar instrument, so as to form a key for the plastering.

**HACKING or HACKING OUT.** Consists of chopping out glass from old sashes, etc., when it is said to be "hacked out".

**HACKING.** In walling, consists of the interruption of a course of stones by the introduction of another on a different level for want of stones to complete the thickness, thus making two courses at the end of a wall of the same height as one at the other. The last stone laid is often notched to receive the first stone of the other where the two heights commence.

**HACKMATAK.** The American larch.

**HACKS.** Are long parallel banks raised about six inches from the ground, for drying bricks out of doors; the rows in which bricks are laid to dry after being moulded. This method is termed "hacking".

**HADING.** The dip or inclination of a vein or stratum.

**HÆMATITE PIG IRON.** Such as Cleator, Harrington, Carnforth, Askam, Barrow and Workington, is produced from the rich ores of Cumberland; largely used by tinplate, sheet iron and steel manufacturers.

**HAFFIT.** Scotch term for a seat end in church seating.

**HAFT.** A handle; to furnish with a handle.

**HAGIOSCOPE.** Elevation apertures. Same as Squints, which see.

**HA HA.** A sunk hedge.

**HAIR.** Cow hair used in plastering to improve its coherence.

**HAIR FELT.** Is dry and not impregnated with asphalt, etc.; it is used for preventing the escape of heat from pipes, boilers, etc.

**HAIR PENCIL.** A brush made of very fine hair, for painting or "picking out".

**HAKE.** A shed for drying draining tiles. See Hack.

**HALF AND HALF SOLDER.** An alloy of equal parts of new tin and new lead. The term is often used to define solders containing from fifty-five to sixty per cent. of lead; also known as "commercial," "market," etc.

**HALF MITRE.** Is an angle, one quarter of a quadrant or square, *i.e.*, an angle of twenty-two degrees and a half.

**HALF MOON.** In fortifications, an outwork composed of two faces forming a salient angle whose gorge is in the form of a half moon.

**HALF-PACE or HAUTE-PACE.** A raised floor in a bay window, before a fireplace, or in similar situations.

**HALF PLAIN WORK.** A term sometimes applied to the joints of cut stone work when left as they come from the saw, or to roughly picked or hammered surfaces brought to a sufficiently smooth condition for ordinary joints, by dressing them with a punch or point leaving the marks of the tool all over the surface; the labour on the above is also described as "half plain work" and is worth about half the price of plain work.

**HALF RIPPER or HALF RIP SAW.** Has three teeth to the inch; used by joiners for ripping wood with the grain only.

**HALF ROUND.** A semicircular moulding such as a bead, nosing or torus.

**HALF SAWING.** Is when one saw cut makes two faces or sides.

**HALF SLATING.** That in which there is a space between the individual slates of each course.

**HALF SOCKET PIPE.** A drain pipe having a socket only half way round the pipe in case the pipe has to be taken up to clean the drain.

**HALF SOVEREIGNS.** Small cubical blocks of granite paving used at crossings and curves.

**HALF SPACE LANDING.** In stair-casing, is that in which the landing stretches from wall to wall, or across the entire width of the progressive and retrogressive flights; also called "half pace".

**HALF TIMBERED.** Walls constructed of timber framing and filled in with bricks or concrete.

**HALF-TUCK POINTING.** That laid on with a trowel and the top and bottom cut off along a straight edge with the trowel or "Frenchman".

**HALL.** A large room or wide passage at the entrance of a house; a college; an edifice of a college; a manor house; an edifice in which courts of justice are held.

**HALLING LIME.** Is that obtained from the beds of the lower chalk, near Rochester, in Kent; expands considerably in slaking, slightly hydraulic; makes excellent mortar when mixed with three parts of sand to one of lime.

**HALLYINGS.** The hangings of a hall.

**HALVANS.** In Cornish, the refuse ore.

**HALVING.** A method of joining timbers by fitting half of one into half of the other.

**HAM.** A Saxon term for a house or dwelling place, farm, street or village.

**HAMBURG LAKE.** A colour of great power and depth, rather purplish or inclining to crimson.

**HAMBURG WHITE.** Is composed of one part of white lead to two parts of sulphate of baryta.

**HAMLET.** A small village; a cluster of houses in the country.

**HAMMER AXE.** An implement with a hammer on one side and an axe on the other.

**HAMMER BEAM.** Is a beam frequently used in the principals of open timbered roofs to strengthen the framing and to diminish the lateral pressure that falls upon the walls; each principal has two hammer beams which occupy the place of a tie beam.


**HAMMER BLOCKED or HAMMER FACED.** Consists of stones with their faces merely scabbled; stone roughly squared in the quarry.

**HAMMER DRESSED.** A term applied to stone hewn or dressed with a pick or pointed hammer instead of a chisel; also called "nigged ashlar".

**HAMMERED RIVETS.** Are those having their points finished by hammering only.

**HAMMER-FACED ASHLARS.** Are squared stones merely left rough from the face hammer in the centre and having a narrow draughted margin round them.

**HAMMER HARD.** Said of iron or steel hardened by hammering.

**HAMMER HEAD or HAMMER HEADED KEY.** Is chiefly used in the joints of circular work, as door frames, window frames, etc., with circular heads; it is generally made of hard wood and the wedges shaped thus, .

**HAMMERING.** A method of veneering in which the pressure is accompanied by damp heat.

**HAND BARROW.** A kind of small platform with two handles at each end; used by two men for carrying heavy weights.

**HAND BRACE.** A tool for boring.

**HAND CART.** A two-wheeled vehicle adapted to carry light loads; propelled by hand.

**HANDED.** Anything made in pairs, *i.e.*, to the right hand and left hand.

**HAND FLOAT.** A small flat piece of board with a handle at the back, like a plastering tool; used for floating and smoothing off finishing coats.

**HAND GATE.** A small gate or wicket for the admission of persons only, or it may be for cattle.

**HANDICRAFT.** Work performed by the hand; manual labour or occupation.

**HANDICRAFTSMAN.** One employed or skilled in handicraft.

**HAND IRONS.** Are used by plumbers for shifting about sheets of lead; they are made of iron of a convenient size, about eighteen inches long with a cross piece about nine inches long at one end; a foot about six inches long is formed at the bottom by bending the iron at right angles.

**HANDLING.** The art of managing the pencil; the peculiar style of painting of an artist.

**HAND MASTS.** Are the longest, soundest and straightest trees after being barked and topped; chiefly applied to those having a circumference of between twenty-four and seventy-two inches.

**HAND POLISHED.** A term applied in varnished work, when, after a sufficient number of coats of varnish has been laid on, the surface is rubbed with the palm of the hand and the ball of the thumb; for mouldings, a piece of clean moist wash-leather is held in the left hand over which the right is lightly passed to absorb sufficient moisture. Another method is to make a rubber with silk pads, using precipitated chalk, crocus, tripoli, rotten-stone and sweet oil or water, according to the finish desired; hand polishing is only done in first-class work when a superior finish is required.

**HAND POWER.** Said of a machine when propelled by hand or manual labour.

**HAND RAIL.** In staircasing, the rail raised upon and supported, generally, by the balusters.

**HANDRAIL SCREWS.** Are from about three to six inches long and are threaded at each end, one end having a square nut and the other

a circular nut, having at intervals deep nicks in its circumference to receive the end of the handrail punch to turn it round; used for joining together two lengths of handrail, circular door heads, etc.; also called "handrail bolt".

**HAND SAW.** A saw riveted at one end to a handle, and adapted to be used by hand.

**HAND SCREW.** A contrivance for raising heavy timbers or weights; a thumb screw used by joiners is so called.

**HAND SPIKES or LEVERS.** Are generally made of ash or hornbeam; they are about three inches in diameter and five feet long with the end slightly curved and shod with iron; they are used for shifting balks of timber, etc.

**HAND SPIKES.** For plumbers' use, are made similar to the foregoing but without any iron; used for shifting rolls of lead.

**HAND WROUGHT NAILS.** Are those forged by manual labour, stronger, tougher and more expensive than other varieties; will bear clenching without breaking.

**HANG.** See Hung.

**HANGING.** The operation of fixing the hinges on doors, etc., also fixing the cords and weights to sashes.

**HANGING BUTTRESS.** A buttress supported on a corbel.

**HANGING GARDENS.** Gardens in terraces, rising behind one another.

**HANGINGS.** Linings for rooms, such as tapestry, paper hangings, etc.

**HANGING STEP.** A step, usually stone, built into a wall at one end, and unsupported at the other end.

**HANGING STYLE.** The style of a door, shutter, etc., on which the hinge is fastened.

**HANGING TILES.** Plain tiles laid on a vertical wall, sometimes rebated.

**HANGING VALVE.** A flap of metal hanging down from a hinge, common in rotary steam engines and pumps.

**HANG OVER.** Implies the condition of a wall, etc., when the top projects beyond the bottom.

**HARD BRANDS or DRY STAMPED.** Applied to deals marked at their ends with a blow of a branding hammer.

**HARD CORE.** The large-sized material used for making the foundation of a road.

**HARD PAVIORS.** Are bricks slightly blemished in colour and rather burned; they are used for copings, pavings, etc.

**HARDS or HARD SOLDER.** A term applied to plumber's solder made of scraps, such as tin pipe, pewter pots, bits of lead, etc.; an alloy of copper and zinc used for soldering copper or brass and iron; it will not smelt below a red heat.

**HARD STEEL.** Steel containing a large percentage of carbon.

**HARD STOCKS.** Are overburnt bricks, sound, but blemished in colour and form; chiefly used for footings, pavings, etc.

**HARD WATER.** That which contains some mineral substance that decomposes soap, and thus renders it unfit for washing. Hard water is probably so named because of the harsh feel when rubbed between the hands without soap; when soap is employed, a large amount has to be used before a lather is obtained.

**HARDWOOD LACQUER.** Consists of dissolving shellac in spirits of wine; generally applied with a rag to turned articles while in motion on the lathe.

**HARDWOODS.** Those of a fine close grain, such as oak, walnut, teak, etc.

**HARDY.** An ironsmith's chisel.

**HARL.** Scotch term for "rough cast".

**HARMONICAL PROPORTION.** Is that which, in a series of quantities, any three adjoining terms being taken, the difference between the first and second, is to the difference between the second and third, as the first is to the third.

**HARMONY.** The blending or union of colours so as to be pleasant to the eye. Work is said to be in "harmony" when free from opposing interests.

**HARMUS.** In ancient architecture, a tile used for covering the joint between two common tiles.

**HARNESS ROOM.** A room where harness is kept, and fitted accordingly.

**HARP PENDENT.** A pendent shaped in the form of a loop for a single gas burner which is inside the loop at the bottom; generally fixed to the ceiling in passages, lobbies, etc.

**HARWICH CEMENT.** Is a natural cement, made by burning nodules, found in geological formations; sets rapidly, but attains no great ultimate strength. Harwich and Sheppey cements are those made from nodules found in the London clay at Harwich and Sheppey.

**HASP.** A clasp that passes over a staple and fastened by a padlock.

**HASSOCK.** The provincial term for Kentish ragstone; also applied to the sand or soft stone which is interstratified with it.

**HAT AND CLOAK PIN or HOOK.** An iron, wood or brass hat peg; when having two arms, one above the other, they are called "double hat and cloak pins".

**HATCH.** A bolt; a bar; a half door; a shutter to cover a hatchway.

**HATCH.** To shade in a drawing with lines crossing each other; any small door or window for passing things through, as a "serving hatch" (which see).

**HATCHES.** Holes left in roofs to give convenient access to the outside for the purpose of repairs, etc.

**HATCHET.** A small axe used by carpenters for reducing the edges of boards, etc.

**HATCHING.** In drawing, the diagonal lines that indicate a thing shown in section.

**HATCHMENT.** The escutcheon of a deceased individual placed in front of the house, etc.

**HAT RAIL.** A rail fixed on a wall at a convenient height, and provided with pins, for hanging hats on.

**HAUL.** To pull or draw with force; to drag, to cart.

**HAULAGE.** The charge for hauling; the act of hauling. Same as Cartage.

**HAUNCH.** The wide part left close to the root when part of a tenon is cut away.

**HAUNCHED TENON.** A tenon made less than the width of a rail and the remaining part left about half an inch long, or as required; this is called the "haunch" of the tenon. The tenons on the rails of a four-panel door is an example of a "haunched tenon".

**HAUNCH OF AN ARCH.** That part between the vertex and the springing, or between the crown and the skewback.

**HAURIANT.** In heraldry, said of fish represented in a perpendicular position as if sucking in the air.

**HAWHAW.** A fence in an alley sunk between slopes, and not perceived till approached.

**HAWK.** A small square board, used by plasterers, about ten inches square with a short handle at the centre of the back; used for holding the plaster, etc., when applying it with the trowel.

**HAWK BOY.** Assists the plasterer and beats up the mortar, etc., on the board to prevent its setting, and feeds the hawk with small pats at a time.

**HAWS.** In Domesday Book, mansions or dwelling houses.

**HAWTHORN.** A wood very little used, hard and of a whitish colour, with a tinge of yellow.

**HAZEL.** A small underwood, very elastic, used for turning, handles of blacksmiths' chisels, etc.

**H.B.** Denotes fairly hard and black, very suitable for writing.

**HEAD.** The fall of water available for driving mills; available steam.

**HEAD.** The "head" of water is a term applied to the difference, in levels measured in a vertical direction only, between the surface of the supply reservoir and of the water at delivery.

**HEAD.** Scotch term for the end of a quoin, stone or rebate.

**HEAD.** A long stone over a door or window opening; the horizontal piece at the top of a door frame, window frame, etc.; the vertical height to which water will rise in a pipe under any given pressure.

**HEADER.** A stone or brick whose greatest dimension lies in the wall; the method of placing bricks and stones in a wall; the head or end of the brick or stone showing on the face of the wall.

**HEADING.** A small tunnel made horizontally below the surface of the soil.

**HEADING BOND.** In brickwork, is when the wall is only one brick thick, consequently the ends or headers are all shown on the face of the wall, both sides.

**HEADING COURSE.** In brickwork and masonry, that in which the length of the stone or brick is across the thickness of the wall, thus showing a header on the face of the wall.

**HEADING JOINT.** The joint at the end of a flooring board; any butt joint; in arches, the joint in a plane at right angles to the axis.

**HEAD JERKIN.** See Jerkin.

**HEADLAND.** A strip of unploughed land at the ends of furrows or near a fence.

**HEAD MAIN.** The main ditch by which water is drawn from a river, etc., for irrigation.

**HEAD NAILED.** In slating, slates when fixed with nails close to the head of a slate.

**HEAD OF A BOLT.** The enlarged end of a bolt.

**HEAD OF A RAIN-WATER PIPE.** The enlarged funnel generally placed at the top of a rain-water pipe to receive the water from the gutters, more or less ornamental; also called "hopper head".

**HEAD OF A SLATE.** Is its upper edge.

**HEAD RAIL.** The stout rail with pulleys for Venetian and many descriptions of outside blinds.

**HEADS.** Tiles which are laid at the eaves of a house.

**HEADSTOCK.** That portion of a lathe which contains the mandrel;

the head which supports the cutters in a planing machine.

**HEAD STONE.** The principal stone; the corner stone; the stone at the head of a grave.

**HEADWAY.** The height from the bottom to the top of any opening for passage, as a doorway, etc.

**HEADWAY OF STAIRS.** The clear distance measured perpendicularly from a given landing place or stair to the ceiling above, allowing for the thickness of the steps.

**HEADWORK.** A term frequently applied to the heads and other ornaments on the keystones of arches.

**HEALING.** The covering of a roof with lead, slates, zinc, etc.

**HE AND SHE JOGGLE.** Is a joggle joint in stone; it consists of a tongue cut slightly tapering on one edge and fitting into a corresponding groove worked in the other edge.

**HEART BOND.** Consists of two stones being placed in a longitudinal position extending the exact thickness of the wall, another stone is put over the joints in the centre of the wall.

**HEARTH.** The paving, or space, under and in front of a grate; a stone flag about three inches thick, used for a hearth.

**HEARTH STONE.** The stone forming the hearth of a fireplace.

**HEARTING.** Is the interior of a rubble wall, well packed with spalls and mortar.

**HEARTSHAKES.** Are splits, shakes or clefts which occur in the centre of a tree, caused by exposure to the air.

**HEART WOOD.** The hard central part of the trunk of a tree.

**HEATH.** Open ground abounding with the plant called heath, or any other shrub.

**HEATHER ROOF.** A thatched roof in which heather is used instead of straw; used in Scotland.

**HEATING.** Promoting warmth or heat.

**HEATING APPARATUS.** An apparatus for warming buildings.

**HEAVINESS.** The state or quality of being heavy; defined by Rankine as the weight of a unit of volume of

a substance in units of weight; as a rule it is expressed in pounds to the cubic foot.

**HEAVY SPAR.** A heavy sparry mineral consisting of baryta and sulphuric acid.

**HECATOMPEDON.** A temple of 100 feet in length, especially the Parthenon at Athens.

**HECK.** A door latch.

**HECTARE.** A French measure containing a hundred acres or nearly two and a half English acres.

**HECTOGRAM.** A French weight or measure containing 100 grammes or 3 oz. 8.4383 drams avoirdupois.

**HECTOLITRE.** A French measure of capacity containing 100 litres, nearly twenty-two gallons.

**HECTOMETRE.** A French measure of length = 109.3633 yards.

**HECTOSTERE.** A French solid measure containing 100 cubic metres = 3531.66 cubic feet.

**HEDGEROW.** A row or series of shrubs or trees planted for the enclosure or separation of fields, etc.

**HEDYPHANE.** An oxide of lead and lime.

**HEEL.** A term sometimes applied to the "cyma-reversa".

**HEEL OF A RAFTER.** The end or foot that rests upon the wall plate.

**HEEL POST.** The post at the end of a division of a stall in a stable.

**HEEL STRAPS.** Are iron straps used to secure the feet of struts butting against other timbers in an oblique direction, such as the foot of a roof principal, etc.

**HEEL SUPPORT.** A kind of foot cast on a vertical bend in a cast-iron pipe, to afford a support to the pipe above.

**HEIGHT.** The altitude of an object above its foot, basis or foundation.

**HEIGHT.** The perpendicular length of anything.

**HEIGHT OF AN ARCH.** A line drawn from the middle of the chord or span to the intrados. Same as Rise.

**HEIGHT OF COLUMNS.** The height of a column is measured by its diameter immediately above the base.

	Diameters high.
The Tuscan column . . . . .	7
The Ionic . . . . .	9
The Corinthian and Composite	10

In the above heights are included the capitals and bases, which are esteemed parts of the columns with which they are used.

**HEIL.** To cover; to tile; to slate.

**HEILING.** See Healing.

**HELICAL HINGE.** A hinge of spiral form.

**HELICAL LINE OF A HANDRAIL.**

The spiral line twisting round the cylinder, representing the form of the handrail before it is moulded.

**HELICAL SPRING.** A spiral spring.

**HELICOID.** A curved surface generated by a right line in motion about a fixed line; curved like the spiral of a univalve shell.

**HELICOID.** A geometrical spirally curved figure.

**HELIX.** In geometry, is a curve formed by the hypotenuse of a right-angled triangle when the base is bent into a circle.

**HELIX OR HELICES.** The small volute under the abacus of a Corinthian capital; it forms a part of the foliage and occupies the space between the upper leaves and the abacus, and springs between every two leaves in the upper row as if proceeding from one common vertical stalk; they first throw out foliage and then terminate in volutes, the small inner scrolls or volutes being called "caulicoli".

**HELIX.** Anything of a spiral form, whether in one plane as the spiral curve, or in different planes, as the screw.

**HELLAMS.** Small hand bundles in which straw is laid.

**HELLIER.** A local name for a slater or tiler.

**HELMET OR HELM.** In heraldry, the part of a coat of arms that bears the crest.

**HELVE.** The handle of an axe, hatchet, spade or pick; also called "heft" in Scotland.

**HELVE HAMMER.** A large ponderous hammer for manufacturing wrought iron.

**HEM.** The spiral projection of the rim of a volute in the Ionic capital.

**HEMATITE.** An ore of iron of two species, a red and a brown.

**HEMICYCLE.** A semicircle; a semicircular space; vaults of the cradle form, and arches, or sweeps of vaults, constituting a semicircle.

**HEMISPHERE.** In geometry, the half of a globe or sphere, when divided by a plane passing through its centre.

**HEMITRIGLYPH.** A half triglyph.

**HEMLOCK SPRUCE.** Is obtained from New Brunswick; it is firmer than that of the white pine, although coarser grained; it gives better hold to nails, and offers more resistance to the impression of other bodies.

**HENCH.** The narrow side of a chimney shaft.

**HENDECAGON.** A plane figure of eleven sides and angles.

**HENGIN.** A prison or house of correction.

**HEPTAGON.** A plane figure consisting of seven sides and seven angles.

**HEPTAGON.** In fortifications, a place that has seven bastions for defence.

**HEPTAHEDRON.** A solid figure with seven sides.

**HEPTAHXAHEDRAL.** Presenting seven ranges of faces, one above another, each range containing six faces.

**HEPTANGULAR.** Having seven angles.

**HERALDRY.** The science of armorial bearings.

**HERISSON.** A bar armed with iron spikes for obstructing a passage or window, etc.

**HERMES OR HERMÆ.** A pillar or square shaft terminating in a bust; statues of which only the head is carved and sometimes the bust; square or cubical figures of the god Mercury, without legs or arms, anciently placed by the Greeks and Romans at their cross ways.

**HERNOSAND WHITE DEALS.** Are hard and stringy and are only used for rough work.

**HERRING-BONE.** Rows of stone, brick, wood, etc., sloping in different directions in alternate courses or rows.

**HERRING-BONE BOND.** A method of building brickwork in diagonal lines; used for cores of arches and other places where something different is required; it is frequently introduced in walls in bands for ornament. The work should be begun and continued with the set square of forty-five degrees, so that the joints will all cut straight with one another, that is, if all the bricks are of one length.

**HERRING-BONE STRUTTING.** Is the name given to struts nailed side by side in the form of the letter X, and placed in a line between floor joists to give additional strength and stiffness.

**HERRING-BONE WORK.** Brickwork or masonry in which the stones are laid aslant instead of being bedded flat.

**HERSE.** A framework for lights used on ceremonial occasions, especially connected with funerals in churches.

**HERSE.** A temporary monument raised over a grave.

**HERSE.** In fortifications, a portcullis in the form of a harrow set with iron spikes, for blocking up a doorway.

**HERSILLON.** In fortifications, a "herse".

**HEWER.** The workman who dresses the stone.

**HEWN.** Dressed with mallet and chisel.

**HEWN STONE.** That which is reduced to a given form by the use of the mallet and chisel.

**HEXAFOIL.** A geometrical figure used in tracery; it is composed of six lobes or parts of circles joining each other.

**HEXAGON.** A plane figure of six sides and angles.

**HEXAGONAL.** Having six sides and angles.

**HEXAHEDRON.** A regular solid body of six sides; a cube.

**HEXASTYLE.** A portico having six columns.

**HEXASTYLOS.** A frontage of six columns.

**HEXOCTAHEDRON.** A solid bounded by forty-eight equal triangular faces.

**HIATUS.** An aperture; a breach, or defect.

**HICK JOINT POINTING.** A term applied to pointing, after which the joints are raked out, a fine superior mortar is inserted in the joints and finished flush with the surface.

**HICKORY WHITE WALNUT.** A name given to several American nut-bearing trees of the genus *Carya*. The wood of the young trees is exceedingly tough and flexible.

**HIDE.** A certain portion of land, from sixty to a hundred acres.

**HIEROGLYPHIC.** A species of writing practised by the ancient Egyptians and Mexicans, in which the figures of objects are employed to represent ideas or letters.

**HIGH PRESSURE.** A pressure of more than fifty pounds of steam on the square inch; working at such pressure.

**HIGH PRESSURE.** Said of a steam engine, etc., in which the steam is at a very high temperature, and exerts a pressure greater than the atmosphere. In the high pressure system of hot-water heating, the water circulates in wrought-iron tubes of seven-eighths or one inch internal diameter, closed to the atmosphere and connected to a boiler formed of tubing coiled within a furnace; the circulation may be arranged either single, double, branched or crossed, and the temperature of the pipes may be 350°.

**HIGH SCHOOL.** A superior day school for all classes, above those provided for by the Elementary Education Act.

**HIGHWAY.** A public road; a way open to all passengers.

**HIGH WROUGHT.** Wrought with exquisite art or skill.

**HILING.** The covering or roof of a building.

**HIN.** A Jewish measure for liquids containing rather more than a gallon.

**HINGE.** The joints on which doors, gates, etc., turn; the names and forms of hinges are legion.

**HINGE STONE.** A stone into which the hook of a gate hinge is fixed.

**HIP.** The external angle formed by the meeting of the sloping sides of roofs which have their wall plates running in different directions.

**HIP or CORNER TILES.** Are those used on the hips of roofs.

**HIP or HIPPED ROOF.** A roof is said to be "hipped" when the external angle is formed by the meeting of the sloping sides of a roof which have their wall plates running in different directions; the end is sloped like the sides of the roof. Thus when a roof has the end sloped back instead of finishing with a gable, the roof is said to be "hipped" and the pieces of timber in these angles are called "hip rafters".

**HIP HOOK.** An iron hook fixed at the bottom of a hip to keep the hip tiles from sliding down.

**HIP KNOB.** Is a finial or pinnacle or other similar ornament placed at the intersection of the hips with the ridge of a roof.

**HIP MOULD.** The back of the hip; the mould or pattern by which the hip is set out.

**HIPPED.** Furnished with or having a "hip".

**HIPPODROME.** Among the Greeks, a racecourse.

**HIP RAFTER.** Is the rafter in the salient angle formed by the intersection of the sides and ends of a roof.

**HIT AND MISS VENTILATORS (Glass).** Are those in which the perforations in a pane of glass can be opened or closed by a revolving or sliding glass plate with corresponding perforations.

**HIT AND MISS VENTILATORS.** Consist, generally, of two plates of sheet metal or other substance which have similar perforations or slots through them, one plate being fixed in the same frame in which the other plate slides in grooves.

**HOARDING.** A fence of rough boarding, frequently used round the scaffolding of a building during erection or alterations.

**HOAR STONE.** A stone designating the bounds of an estate; a landmark.

**HOB.** The flat iron shelf or projection at the side of an old-fashioned gate.

**HOD.** A trough, having one end provided with a long handle; used by labourers for carrying mortar and bricks on the shoulder; capable of holding from sixteen to twenty bricks or two-thirds of a cubic foot of mortar.

**HODMEN.** Are bricklayers' or masons' labourers carrying the hod.

**HOGGER PUMP.** The top pump in the sinking pit of a mine.

**HOGSHEAD.** A measure of capacity containing sixty-three wine gallons or fifty-two and a half imperial gallons; any large cask or barrel; a butt; a cask containing from 100 to 140 gallons.

**HOIST.** An apparatus for hoisting or raising materials from one height to another, as from the ground floor of a building to a floor above.

**HOISTWAY.** A passage, or well hole for a hoist.

**HOLDFAST.** A long nail or spike with the head beaten out flat and having one or two holes in it; used for securing objects to a wall.

**HOLE AND CORNER.** To undercut a coal seam.

**HOLED STONES.** The name given to a peculiar kind of prehistoric stone monuments, presumably sepulchral, occurring in Britain, Ireland, France, Cyprus and India. The size of the hole varies considerably, some being no larger than half-a-crown, others affording a passage for the human body.

**HOLING AXE.** A narrow axe for cutting holes in posts.

**HOLLAND.** A kind of linen used for blind making.

**HOLLOW.** A concave moulding whose section is about the quarter of a circle; sometimes called "casement". The concave side of a board when warped is said to be "hollow".

**HOLLOW EMBOSSED.** Same as Hollow Relief.

**HOLLOW NEWEL.** Same as Well Hole; an opening in the middle of a staircase; the hollow newel used in spiral staircases; also a hollow groin pier, of brick or stone, made behind the lock gates of canals.

**HOLLOW NOSING.** A nosing of lead formed in a similar way to a hollow roll.

**HOLLOW QUOINS.** Piers of brick or stone made behind the lock gates of canals; also called "hollow newels".

**HOLLOW RELIEF.** Relief pressed or hammered out from behind.

**HOLLOW ROLL.** A method of dressing lead in the form of a roll, which, as its name implies, is hollow inside.

**HOLLOWS AND ROUNDS.** Planes for forming rounds and hollows; used for sticking mouldings, etc.

**HOLLOW WALLS.** Are built in two separate portions, standing vertically parallel to one another, and divided by a space of two or three inches and connected at intervals with bonding bricks or iron ties and cramps.

**HOLLOW WELT.** A single lead welt dressed over a fillet, the edge being simply curled over, not dressed flat; used in secret gutters, etc.

**HOLOPHOTAL.** Utilising the whole of the available light; applied to the illuminating apparatus in lighthouses.

**HOLLY.** Is a very clean, fine grained wood of a white colour; mostly used for fancy articles.

**HOLY OF HOLIES.** The innermost apartment of the Jewish tabernacle or temple where the ark was kept.

**HOLY ROOD.** The cross in Roman Catholic churches over the entrance to the chancel.

**HOLY WATER STONE.** The stoup on which the holy water vessel is placed.

**HOLY WATER VESSEL.** The receptacle for holy water placed at the entrances of Roman Catholic churches.

**HOME FARM.** The farm attached to the mansion house of the land owner.

**HOME OFFICE.** Office of the home department.

**HOMER.** A Hebrew measure containing as a liquid measure seventy-five gallons, and as a dry measure thirty-two pecks.

**HOMESTALL.** A mansion house or seat in the country; a farm with the land adjoining. Same as Homestead.

**HOMOGENEOUS.** A term applied to various substances to denote that they consist of similar parts, or parts of the same nature and kind.

**HOMOLOGOUS.** In geometry, the correspondent sides of similar figures. The areas and solid contents of such figures are also homologous.

**HOMOTAXIAL, HOMOTAXEUS.** Occupying the same geological position.

**HOMOTAXIS.** The arrangement of strata in different localities, apparently in the same relative position in the geological series.

**HONDURAS MAHOGANY.** Is obtained from the country round the Bay of Honduras; it is of a golden or red-brown colour of various shades, strong, tough and flexible when fresh, but becomes brittle when dry; chiefly used for handrails, counter tops, cabinet work, etc.; imported in logs from two to four feet square, and from twelve to fourteen feet or more in length.

**HONEYSUCKLE.** An ornament conventionally imitating the honeysuckle flower.

**HONEYSUCKLE ORNAMENT.** A decoration constantly introduced into Assyrian and Greek architecture; founded upon the flower of the honeysuckle.

**HONG.** The Chinese name for a foreign factory in Canton.

**HONOUR POINT.** In heraldry, the point immediately above the centre of the shield, dividing the upper portion into two equal parts.

**HOOD MOULD.** A band or string over the head of a door, window, or other opening. Same as Drip-stone.

**HOOK.** A bent piece of iron used to fasten bodies together, or on which to hang an article.

**HOOK.** A carpenter's saw is said to have too much "hook" when the teeth lean forward; this defect causes the saw to "kick".

**HOOK.** That part of a strap hinge attached to a door frame.

**HOOK AND EYE.** A fastening for a cupboard door, similar to a "cabin hook," only smaller; a square-headed iron hook driven into a wall behind lead or zinc rain-water pipes, and having an eye formed out of a strip of sheet copper, which being soldered to the pipe fits over the hook.

**HOOK AND EYE HINGES.** Are those chiefly used for heavy outside doors, such as to stables, etc.; the hooks are either riveted to plates or screwed into or right through the frame and secured with nuts, the eye is fixed to the door. Same as Strap Hinges.

**HOOK PINS.** See Drawbore Pins.

**HOOK REBATE.** A joint or rebate of an  $\eta$  section; frequently employed in the joints of casements to make them draught or weather proof.

**HOOK RING.** An eye for a cabin hook or a cupboard hook; a "screw eye".

**HOOPING.** Fixing an iron ring on the head of a pile to prevent splitting; the ring is removed when the pile is driven and is charged as use and waste.

**HOOP IRON.** Wrought iron from one to two inches wide and about one-sixteenth thick; sometimes used for the tongues of flooring boards, etc.

**HOOP IRON BOND.** Or "iron bonding," applies to the method of laying hoop iron between the courses of bricks in a wall to form a longitudinal tie; the hoop iron is sometimes tarred and drawn through sand to prevent rust, or laid in Portland cement.

**HOPPER.** A wooden funnel-shaped head to a shute through which grain passes into a mill, etc.

**HOPPER.** A conical vessel suspended from the ceiling, containing sand and water for the use of a glass cutter.

**HOPPER HEAD.** A funnel-shaped head to a rain-water pipe, or flour or corn shute.

**HOPPER WATER-CLOSET.** Consists of a funnel-shaped water-closet basin fixed over a syphon trap.

**HOPPET.** A dish used by miners to measure the ore.

**HORIZONTAL CORNICE.** The level part of the cornice of a pediment under the two inclined or raking cornices.

**HORIZONTAL LINE.** In perspective, the vanishing line of planes parallel to the horizon; a line parallel to the horizon, *i.e.*, level.

**HORIZONTAL PLANE.** Any plane perfectly horizontal or level. In perspective, a plane passing through the spectator's eye, parallel to the horizon, and cutting the perspective plane in a straight line, called the horizontal line.

**HORIZONTAL PROJECTION.** The projection made on a plane parallel to the horizon.

**HORIZONTAL RAFTER.** A purlin having the roof boarding nailed directly on them, the ordinary rafters being omitted.

**HORN.** A name sometimes given to the Ionic volute; the projecting moulded ends of the styles of sashes at the meeting rails; the ends of styles generally left a little longer than required when making framing, etc., to enable the style to be knocked off without injury; the projecting end of the head of a door frame, sill, etc.; the sloping part of a tusk tenon above the tusk; the projection on the basin of a water-closet for connecting with the service pipe.

**HORNBEAM** (*Carpinus betula*). Is obtained from a British tree; it is hard, tough, strong, without sap, white in colour, and has the medullary rays plainly marked; used chiefly for agricultural implements, turned articles, etc.

**HORNBLende.** A conspicuous ingredient in the composition of rocks, divided into common hornblende, hornblende schist, and basaltic hornblende.

**HORNBLende SCHIST** or **HORNBLende SLATE.** Resembles mica schist but is tougher and has not so glistening a lustre; it is composed chiefly of hornblende, felspar and

frequently grains of quartz; it is usually black in colour and is an excellent material for flagging purposes, etc.

**HORN LEAD.** Chloride of lead.

**HORN MERCURY.** Calomel.

**HORN SILVER.** Chloride of silver; from its horn-like appearance when fused.

**HORN SLATE.** A grey or silicious stone.

**HORNSTONE.** A compact, flinty variety of quartz rock.

**HORN WORK.** In fortifications, an outwork composed of two demi-bastions joined by a curtain.

**HOROGRAPHY.** The art of constructing dials.

**HOROLOGE.** An instrument for showing the hour.

**HOROLOGIST.** One skilled in horology; a maker of horologes.

**HOROLOGIUM.** A name formerly given to any instrument for measuring time; an account or treatise of such instruments.

**HOROLGY.** The art of measuring time or of constructing instruments to indicate time.

**HOROMETRICAL.** Pertaining to horometry.

**HOROMETRY.** The art or practice of measuring time by hours, etc.

**HORREUM.** A granary.

**HORSE.** A kind of anvil upon which tin is worked into shape; a name sometimes applied to a trestle.

**HORSE BLOCK or BOX HORSE.** A square frame of strong boards used by excavators to elevate the ends of their wheeling planks or barrow runs; also called "horse" or "horsing block".

**HORSE CHESTNUT.** The timber obtained from this tree is practically worthless.

**HORSE POT.** A kind of cesspool into which the drainage of a stable runs, from which it flows into a drain.

**HORSE-POWER (H.P.).** Is 33,000 lb. lifted to a height of one foot in one minute of time, or equivalent motion against resistance.

**HORSE-POWER.** The power of a horse, or its equivalent as applied to steam power.

**HORSE-POWER, ELECTRICAL.** A unit of power equalling 746 watts of electrical energy. A current of one ampere and 746 volts is an electrical horse-power.

**HORSE RUN.** A contrivance for drawing up loaded wheelbarrows of soil from the deep cuttings of foundations, canals, docks, etc., by the help of a horse attached to a rope passing over a pulley.

**HORSESHOE DRAINS.** In agricultural drainage, the old-fashioned U shaped pipes used in an inverted position, and with or without a flat sole to rest upon.

**HORTUS.** A garden or pleasure ground.

**HOSE.** A flexible pipe for conveying water to extinguish fires, etc.

**HOSPICE.** A convent on the Alps for the entertainment of travellers.

**HOSPITAL.** A place of shelter, or institution for treatment, or reception of the sick or infirm; applied to some alms-houses and orphanages.

**HOSPITAL LIGHTS.** Consist of a number of small sashes rebated together at their top and bottom edges and fitted into a solid rebated frame; the sashes are hung by being pivoted at their lower inside corners; so called because of their being much used in hospitals and similar buildings.

**HOT BED.** A forcing pit containing manure and covered with glass for forcing plants.

**HOT BLAST.** Consists of the air being raised to a temperature of 300 or 900°, sometimes more, before being forced into the furnace; by this process a greater heat is obtained and a saving of fuel effected.

**HOT-BLAST—ALL MINE.** Signifies that no cinder, iron or slag has been used in the production of the iron.

**HÔTEL.** A town mansion.

**HOTEL or HOSTEL.** In England, a large inn or place of public entertainment; in France, a palace or dwelling of persons of rank.

**HÔTEL-DE-VILLE.** The guildhall of a French town.

**HÔTEL-DIEU.** In France a hospital.

**HOT FLUE.** A heated chamber for drying clothes.

**HOTHOUSE.** A term used sometimes for the glass buildings used in gardening. A "hotbed" is a bed of earth artificially heated and covered with glass.

**HOT PLATE.** An iron plate heated by fire or steam for boiling sauce-pans, etc., in kitchens.

**HOT PRESSED PAPER.** That with a smooth surface; mostly used for pencil drawing.

**HOT SHORT.** Iron which, although tenacious when cold, cracks when bent at a red heat; sometimes "burnt iron".

**HOT WALL.** A wall with flues for conducting heat to protect or hasten the growth of fruit trees.

**HOUSE.** A place of residence, almost exclusively applied to a dwelling house.

**HOUSE AGENT.** One employed to look after and let household property.

**HOUSEBREAKER.** A demolisher of old houses.

**HOUSE DRAIN.** Is the pipe that receives the contents of the soil and waste pipes and conveys them outside the house and into the sewer.

**HOUSED STRINGS.** Are those housed or grooved to receive the ends of treads and risers.

**HOUSEMAID'S SINK.** A slop sink.

**HOUSE OF CALL.** A house where journeymen of a particular trade assemble when out of work, for the purpose of obtaining employment.

**HOUSE OF CORRECTION.** A term sometimes applied to a prison.

**HOUSING.** Formerly, a tabernacle or niche for a statue.

**HOUSING.** The space taken out of a timber, etc., for the insertion of the end of another which is not reduced but let in full size, when it is said to be "housed in".

**HOVEL.** The canopies over the heads of the statues of Richard II. and Queen Anne are called hovels or tabernacles.

**HOVELLING.** A method of preventing chimneys from smoking by

carrying up two sides higher than those less liable to receive strong currents of air, apertures being left on all the sides for the escape of the smoke.

**HOWEL.** A cooper's plane with a convex sole for smoothing the inside of casks; called a compass or round sole plane by a joiner, who uses a similar plane for his circular work.

**H.P.** Applied to drawing paper, signifies that it is "hot pressed" and has a smooth surface.

**H.P.** The abbreviation for horsepower.

**HUE.** That characteristic of a colour which distinguishes it from any other colour. Hence the word or term "hue" practically becomes a synonym for the word "colour". In everyday use, however, men in the trade apply the word "hue" to a mixture of colours. See Shade.

**HUMUS.** The thin layer of fertile earth on the surface in which alone, according to some authorities, any purification of sewage can take place.

**HUNDRED OF LIME.** In some places is equal to thirty-five bushels, in other places to twenty-five heaped bushels or bags.

**HUNDREDWEIGHT.** 112 lb. avoirdupois.

**HUNG.** Said of doors, sashes, etc., when fixed and in working order.

**HUNGARIAN ASH.** A wood with a beautiful wavy grain; it is generally cut into veneers.

**HUNGRY WOOD.** A term used by French polishers, meaning that the wood is open or coarse in grain and requires a lot of polish or grain filler before a surface is obtained.

**HUNTING BOX.** A temporary residence when hunting or shooting; a shooting box.

**HURDLE.** A movable frame about six feet long and three feet high, of timber or iron; serving for gates, enclosures, etc.

**HURTER.** In fortifications, a piece of wood at the lower end of a platform to prevent the wheels of gun carriages from injuring the parapet.

**HURTOIR.** Same as Hurter.

**HUSTINGS.** Formerly, a wooden erection with a platform, for the nomination and election of parliamentary representatives.

**HUT.** A small house or cabin.

**HYALOGRAPHY.** The art of engraving on glass.

**HYDRALETES.** Formerly, a mill for grinding corn by water power.

**HYDRANT.** A pipe or machine by which water is raised and discharged.

**HYDRATE.** A compound in which a definite quantity of water is combined with a definite quantity of some other element.

**HYDRATED.** Formed into a hydrate.

**HYDRAULIC.** Pertaining to fluids in motion.

**HYDRAULIC CEMENT.** A cement having the property of hardening under water.

**HYDRAULIC JOINT.** A joint made tight by means of water; the slide of a gaselier is sometimes done in this way.

**HYDRAULIC LIME.** A lime having the property of hardening or setting under water. Hydraulic limes and cements are also called "water limes" and "water cements" from their property of setting under water.

**HYDRAULIC MEAN DEPTH.** The quotient obtained by dividing the area in square inches of the cross section of the liquid flowing through a sewer by the wetted perimeter in inches.

**HYDRAULIC MORTAR.** Is made in various ways, one of which is composed of two and a half parts burnt clay, and one part of blue lias lime pulverised, ground together between rollers, and used immediately.

**HYDRAULIC PRESS.** A heavy iron machine worked by water pressure.

**HYDRAULIC RAM.** A kind of force pump by which water is, through its own momentum when falling, raised to a considerable height.

**HYDRAULICS.** The science which treats of the application of hydrodynamics to practical purposes, especially to the raising of water in pipes.

**HYDRAULICS.** The science of fluids in motion.

**HYDRODYNAMIC.** Pertaining to the force or pressure of water.

**HYDROGEN.** A highly inflammable gas constituting one of the elements of water, and the lightest of aeriform bodies; "hydrogen" in combination with oxygen produces water.

**HYDROGRAPHY.** The art of surveying and mapping seas, lakes, rivers and other waters for purposes of commerce and navigation.

**HYDROLOGY.** The science of water, its properties and laws.

**HYDROMETER.** An instrument for measuring the specific gravity of liquids.

**HYDROPHORE.** An instrument for obtaining water at any particular depth.

**HYDROSCOPE.** A hydrometer.

**HYDROSTAT.** An apparatus for preventing the explosion of steam boilers.

**HYDROSTATIC ARCH.** Is an arch in equilibrium under the vertical pressure of water.

**HYDROSTATIC BALANCE.** A balance for weighing substances in water, for the purpose of ascertaining their specific gravities.

**HYDROSTATIC PRESS.** A machine for obtaining an enormous pressure through the medium of water; a hydraulic press.

**HYDROSTATICS.** The science which treats of the pressure of fluids at rest or the conditions of equilibrium in liquids.

**HYETAL.** As regards the rainfall.

**HYETOGRAPH.** A chart of the rainfall in different regions.

**HYETOGRAPHY.** The science of the distribution of rain; a knowledge of the rainfall in different places in a given time.

**HYETOMETER.** A rain gauge.

**HYGEIAN ROCK BUILDING COMPOSITION.** Is a bituminous substance for keeping walls damp-proof. New walls are built in two thicknesses with a space of about half an inch or more between them, which is filled up with the composition being run in in a liquid state as the wall is

carried up. It is applied to existing walls by adding a lining of bricks or tiles with the composition between them.

**HYGIENE.** The science which treats of the preservation of health.

**HYGROMETER.** An instrument for measuring the moisture of the atmosphere.

**HYGROMETRIC, HYGROMETRICAL.** Readily absorbing and retaining moisture; relating to hygrometry.

**HYGROMETRY.** The measurement of moisture in the air.

**HYGROSCOPE.** An instrument for indicating the degrees of moisture in the atmosphere.

**HYGROSCOPICAL, HYGROSCOPIC.** Pertaining to or indicated by the hygroscopic; imbibing moisture from the atmosphere.

**HYGROSCOPICITY.** The property of extending when water is applied and shrinking when it is withdrawn.

**HYGROSTATICS.** The science of comparing or measuring degrees of moisture.

**HYPÆTHRAL.** Said of a building or temple without a roof. In temples the cella is partly exposed to the air, and having a double range of columns within the cella, dividing it into three aisles, the aisles on either side being roofed, the middle one having no covering.

**HYPÆTHRUM.** A latticed window over the entrance door of a temple.

**HYPERBOLA.** One of the conic sections, being that made by a plane putting the opposite side of the cone produced above the vertex, or by a plane which makes a greater angle with the base than the opposite side of the cone makes.

**HYPERBOLIC CONOID or HYPERBOLOID.** A solid formed by the revolution of a hyperbola about its axis.

**HYPERBOLIC CYLINDROID.** A solid formed by the revolution of a hyperbola about its conjugate axis, or line through the centre perpendicular to the transverse axis.

**HYPERBOLIC SPIRAL.** Is a curve passing through one extremity of arcs of equal length drawn from any given point in a straight line called the axis.

**HYPERTHYRUM.** That part of a door frame which is over the supercilium. In Greek architecture, a frieze and cornice supported by friezes and consoles.

**HYPOCAUSIS.** Among the Greeks, a furnace with flues running underneath the pavement of an apartment, to increase the temperature.

**HYPOCAUST.** The place where a fire is kept to warm a stove or a hothouse; an arched chamber for heating baths or dwelling rooms among the Romans.

**HYPOCAUSTUM.** The stove room of a bath; a vaulted apartment from which the heat of the fire was distributed to the rooms above by means of earthen tubes.

**HYPOGENE.** Said of rocks which have not assumed their present form near the surface.

**HYPOGEUM.** A term formerly applied to those parts of a building below the level of the ground.

**HYPOPODIUM.** A footstool used in the ancient baths.

**HYPOSCENIUM.** In ancient architecture, the front wall of a theatre facing the orchestra from the stage.

**HYPOSTYLE.** Having the roof supported by pillars; a porch supported by pillars; a covered colonnade; a pillared hall.

**HYPOSTYLE.** Literally, "under columns," but used to mean filled by columns.

**HYPOTENUSE.** The side of a right-angled triangle opposite the right angle.

**HYPOTHEC.** A security in favour of a creditor over the property of his debtor while the property continues in the debtor's possession.

**HYPOTRACHELIUM or COLARINO.** The necking of a capital introduced between the capital itself and the shaft of the column; also applied to the slenderest part of the shaft of a column, being that immediately below the neck of a capital.

**HYPOZOIC.** Situated beneath the strata that contain organic remains.

**HYPOMETER.** A thermometrical barometer for measuring heights.

**HYPOMETRY.** The art of measuring heights.

## I.

**ICE HOUSE.** A specially constructed chamber for preserving ice from the ordinary changes of temperature.

**ICELAND SPAR or ICE SPAR.** A variety of calcareous spar or carbonate of lime.

**ICH DIEN.** In heraldry, "I serve"; the motto of the Prince of Wales, adopted from John of Bohemia by the Black Prince, who slew him at the battle of Crecy.

**ICHNOGRAPH.** A ground plan.

**ICHNOGRAPHIC.** Pertaining to ichnography; describing or forming a ground plan.

**ICHNOGRAPHY.** A horizontal section of a building, that is, its plan; a description of ancient works of art.

**ICHOGRAPHY.** The representation of the ground plot of a building; in perspective, it is its representation intersected by a horizontal plane at its base or ground floor.

**ICHNOLITE.** A stone with the impression of a footmark.

**ICHOLOGY, ICHNOLITHOLOGY.** The science which treats of and classifies fossil footprints; such footprints collectively.

**ICHTHYOCOL.** Fish glue; isinglass.

**ICONOGRAPHY.** A treatise on or the study of ancient art as represented by pictures, statues, engravings, etc.

**ICOSAHEDRAL.** Having twenty equal triangular sides.

**ICOSAHEDRON.** In geometry, a regular body or solid consisting of twenty triangular pyramids.

**IDEOGRAPH, IDEOGRAM.** A symbol or figure expressing or conveying the idea of an object without expressing its name.

**IDIOGRAPH.** A trademark.

**IDLE WHEEL.** A wheel between two others to transfer motion.

**IGNEOUS.** Containing or of the nature of fire; emitting fire; produced by fire.

**IGNITE.** To set on fire; to render luminous or red with heat.

**IGNITION.** The act of lighting; the state of being ignited.

**ILEX.** The evergreen or holm oak; the holly.

**ILLUMINATE.** To lighten up; to adorn with festal lamps; to adorn, as a manuscript, etc., with pictures, letters, etc.

**ILLUMINATION.** A festive display of lights; a coloured or gilt ornament, drawing, letter, etc.; the act of illuminating.

**IMAGE.** A term applied to a statue; in perspective, it is the scenographic or perspective representation of an object.

**IMBOW.** To arch over or vault.

**IMBOWMENT.** An arch or vault.

**IMBRICATE, IMBRICATED.** Bent or hollowed out like a gutter; to lap the one over the other, as slates or tiles.

**IMBRICATED TRACERY.** A pattern formed like the tiles on a roof.

**IMBRICATION.** A concave indenture as of tiles; an overlapping like tiles.

**IMITATION BLUE STAFFORDS.** Are bricks having only a surface wash of iron, which only gives the outside colour; when broken they are red inside.

**IMMOVABLES.** Things which a tenant cannot legally take away in leaving a house, etc., commonly called "fixtures".

**IMMURE.** A wall or enclosure; to enclose within walls.

**IMPAGES.** A term applied by Vitruvius to the rails of a door.

**IMPALEMENT.** In heraldry, the arrangement of two coats of arms on one shield, divided by a vertical line.

**IMPASTE.** To lay on colours thickly and boldly.

**IMPASTO.** The thickness of the paint on a canvas.

**IMPENETRABLE PAINT (Gay's).** Is supplied ready for use; it dries quickly with a hard enamel face, very durable, will resist damp and heat better, and smells less than ordinary paint.

**IMPERFECT NUMBER.** One whose aliquot parts do not make up a sum equal to the number itself.

**IMPERIAL.** An "imperial" dome.

**IMPERIAL.** Paper of thirty by twenty-two inches.

**IMPERIAL CITY.** A city which was an independent member of the first German empire.

**IMPERIAL DOME.** A kind of dome whose profile is pointed towards the top and widens towards the base, thus forming a curve of contrary flexure; seen in Moorish edifices.

**IMPERIALS.** Slates the same size as queens, but having sawn edges top and bottom.

**IMPERVIOUS or IMPERMEABLE STRATA.** Those practically incapable of absorbing water, such as granite, gault, etc.

**IMPETUS.** In mechanics, force of motion; the force with which a body is driven or impelled.

**IMPINGE.** In mechanics, to fall against; to strike against; to clash with.

**IMPLUVIUM.** In ancient architecture, the outer part of the court of a house which was exposed to the weather; a square cistern in the entrance hall of a Roman house in which the rain-water from the roof was received.

**IMPOST.** The horizontal mouldings or capitals on the top of a pilaster, pillar or pier from which an arch springs. The springing stone of an arch when it projects from the face of the wall or pier is called an "impost". In classical architecture the form varies in the several orders; sometimes the entablature of the order serves for the "impost" of an arch.

**IMPROPER FRACTION.** A fraction the numerator of which is equal to, or greater than, the denominator.

**IMPROPRIATOR.** A layman who appropriates or has possession of Church lands or ecclesiastical benefice.

**IMPROVER.** One who has not sufficiently learnt his trade during his apprenticeship and therefore works at a lower rate of wage than a journeyman after serving his ap-

prenticeship, to acquire further knowledge.

**IN ANTIS.** A term applied to a temple where the side walls are continued beyond the front wall and the columns placed between, or where the front is terminated by antæ or pilasters and the columns placed between.

**INBOND or INBAND.** Scotch term for a header in masonry.

**INBOND JAMBSTONE.** A stone that goes through the whole thickness of the wall in the jamb of an opening; a bond stone laid in the joint of an aperture.

**INCANDESCENT.** Giving a brilliant light without perceptibly burning away; to glow with heat.

**INCANDESCENT LAMP.** See Glow Lamps.

**INCENSANT.** In heraldry, applied to a boar borne in a furious, angry position.

**INCERTUM.** A term applied by Vitruvius to a mode of building which consisted of small rough stones and mortar, the face exhibiting irregularly formed masonry.

**INCH.** In measurement the twelfth part of a foot whether lineal, superficial or cubic.

**INCH MASTS.** Consist of timber having a circumference of more than seventy-two inches, generally dressed to a square or octagonal form.

**INCH STUFF.** Boards one inch thick; "as per inch," a term applied in hard woods when computing its contents, all stuff of whatever thickness being quoted "as per inch".

**INCIDENCE, INCIDENCY.** The direction in which a body or ray of light, heat, etc., falls upon any surface. The "angle of incidence" is an angle formed by the line of incidence of a ray of light, heat, etc., moving to strike a plane; a perpendicular to that plane. The "line of incidence" is the line in which a ray of light, heat, etc., moves to strike a plane.

**INCISE.** To carve; to cut; to engrave.

**INCLINATION.** The approach of one line, which, if continued, will

meet another on the same plane. Same as Gradient.

**INCLINE.** To deviate from any direction which is regarded as the normal one.

**INCLINED PLANE.** One of the five simple mechanical powers, whose theory is deduced from the decomposition of forces; any surface which forms an oblique angle with the horizon.

**INCLINOMETER.** An apparatus for determining the vertical element of the magnetic force.

**INCLOSURE.** An enclosed place on a racecourse, cricket ground, etc., charged at a higher rate of admission, in order to keep it more select.

**INCOME or ONCOME.** A Scotch term applied to the gathering of a chimney.

**INCRESCENT.** In heraldry, denoting the moon represented with the horns towards the dexter side.

**INCRETIONARY.** Denoting an accumulation of mineral matter from the circumference of a cavity towards its centre.

**INCRUSTATION.** Material, such as scagliola, mosaic, etc., applied by some connecting medium to another body; the disposition of stone-like molecules on the surface of bodies acted on by waters impregnated with calcareous salts.

**INCRUSTED.** In architecture, applied to walls or columns covered with valuable marble or stone.

**INCUMBA.** That part of a column or pillar on which the weight of a whole building lies.

**INCURVATE.** To turn from a right or straight line; curved inward or upward.

**INDEMNIFY.** To secure from or compensate for damage, loss or penalty, as for non-completion of a contract.

**INDEMNITY.** Security against damage, loss or penalty.

**INDENT.** To notch; to cut on the edge into points like teeth; a chase.

**INDENTATION.** A zigzag moulding; the act of indenting.

**INDENTED.** Cut on the edge into points like teeth; toothed together, *i.e.*, with a projection filled to a recess.

**INDENTED BEAMS.** Are made up of two or more timbers, and the sliding prevented by indentations instead of the keys as used in "joggle beams".

**INDENTED COURSES.** In a built beam, are courses of which the beam or posts are fitted to each other by indents (notches) to prevent them from slipping.

**INDENTURE.** A deed under seal entered into between two or more parties.

**INDESTRUCTIBLE PAINT.** Is made in three colours only, *viz.*, chocolate, black and bronze green; it is similar in composition to enamel paints but with the addition of bitumen.

**INDEX.** A hand that points to anything; the exponent of a power.

**INDEX HAND.** A painted hand calling attention to a notice, etc.

**INDEX OF A GLOBE.** A little style on the north serving to point to certain divisions of the hour circle when the globe is turned.

**INDEX OF A LOGARITHM.** The integral part of the logarithm.

**INDEX OF REFRACTION.** The ratio of the sines of the angle of incidence and refraction.

**INDIAN ARCHITECTURE.** Consists of two distinct styles, the Buddhist and the Brahminical.

**INDIAN INK.** A substance made of lampblack and animal glue brought chiefly from China; used for drawing, etc.

**INDIAN MADDER.** A vegetable substance.

**INDIAN RED.** Is a pigment produced from a ground hæmatite ore brought from Bengal; it is made artificially by calcining sulphate of iron; a rosy hue is considered the best, but the tints generally vary.

**INDIAN YELLOW.** A bright yellow pigment imported in the form of balls; is of a fetid odour, and is produced from the urine of the camel.

**INDICATED HORSE-POWER (i.h.p.).** Is the horse-power of an engine as computed from the indicator diagram. If the mean area of the piston be multiplied by the mean effective pressure exerted against it, and also by its speed in feet per minute, this product, on

being divided by 33,000, will be the "indicated horse-power" of the engine.

**INDICATOR.** An instrument for recording pressures. When attached to a locomotive cylinder, and communication opened between the two, it records the pressure at every point in the stroke for one complete revolution.

**INDICATOR.** An apparatus which indicates steam pressure; that which points out or indicates.

**INDICATOR.** A contrivance for showing which bell out of a number has been rung, or, in the case of an electric bell, which push has been actuated; an apparatus for showing and recording the variations of the pressure in the cylinder of a steam engine.

**INDICAVIT.** A writ of prohibition against proceeding in the spiritual court when the suit belongs to the common law courts.

**INDIGO.** A blue pigment obtained by steeping certain plants, from America and Asia, in water, and allowing them to ferment; works well in oil or water but is not durable when mixed with white lead.

**INDIGOTIN.** The pure blue colouring matter of indigo.

**INDIUM.** A very rare metal occurring in minute quantities in zinc ore.

**INDIVISIBLE.** That which cannot be exactly divided; one of the elements assumed to be infinitely small into which magnitudes may be resolved.

**INDUCTION.** The property by which one body, having electrical, galvanic or magnetic polarity, causes or induces it in another body without having actual contact. In other words, an impression of molecular force or conditions from one body on another without direct contact. An electric current in a wire induces currents in conductors parallel to it.

**INDUCTIVE.** Producing induction; susceptible of induction.

**INDURATION.** A term used to signify the firmer consistence which a body acquires from various causes.

**INDUSTRIAL.** Pertaining to industry, to productive occupations or to produce.

**INDUSTRIAL EXHIBITION.** An exhibition of industrial productions.

**INDUSTRIAL SCHOOL.** A school for reclaiming neglected or convicted children.

**INERT.** Destitute of the power of motion, or of active resistance to motive power applied.

**INERTIA.** That property of matter by which it tends to preserve a state of rest when still, and of uniform rectilinear motion when moving; inertness.

**INESCUTCHEON.** In heraldry, an escutcheon borne within a shield.

**INFECTION.** The act or process of infecting; the contamination of the atmosphere or water by morbid particles.

**INFECTION or INFECTIOUS HOSPITAL.** A hospital, more or less isolated, for the cure of infectious diseases.

**INFERIOR ZINC.** That which is spotty and darker in colour than pure zinc; it is not durable if exposed to a smoky atmosphere or sea air.

**INFINITE.** In geometry, that which is greater than any assignable magnitude, excluding all notions of boundary or space.

**INFINITE DECIMAL.** An indeterminate decimal.

**INFIRMARY.** A sick ward or building where sick or suffering people are lodged and nursed.

**INFLUX.** In hydraulics, the act of flowing into anything, as the tide into a bay or river.

**INGATE.** An aperture in a mould for pouring in metal; technically called the "ledge".

**INGLE.** A fireside, especially an old-fashioned one with seats.

**INGLE NOOK.** A fitment, generally of an ornamental character, for an "ingle".

**INGOING.** Scotch term for a jamb.

**INGOT.** A mass of unwrought metal cast into a mould.

**INGS.** Large open meadows, generally situated on low level grounds.

**INITIAL.** To mark with one's initials as a guarantee of correctness.

**INITIAL EXPANSION.** The fall of pressure along the steam line of the diagram, which often takes place in an engine cylinder, between the points of initial pressure and cut off.

**INITIAL PRESSURE.** The pressure in the cylinder as shown by the indicator at the beginning of the stroke. The "initial pressure" is usually below the gauge pressure on account of the wire drawing through the passages between the cylinder and the boiler.

**INJECTION.** The act or process of injecting cold water into the condenser of a steam engine or an atmospheric engine.

**INJECTION COCK.** In mechanics, the cock which admits the cold water; the cock of an injection pipe.

**INJECTION PIPE.** The pipe through which water is injected.

**INJECTOR.** An apparatus for supplying the boilers of steam engines with water.

**INLAID WORK.** That in which one material is sunk into a hollow or sinking in the surface of another.

**INLAY.** Materials prepared or inlaid; to insert the materials, as in inlaid work.

**INLAYING.** The art or process of laying on some under surface a different kind of material or work to that which the original surface would present.

**INN.** A house of lodging for travellers; a college of municipal or common law professors and students; formerly, the town residence of a person of quality.

**INNER PLATE.** The wall plate in a double plated roof which lies nearest the centre of the roof.

**INNER SQUARE.** The edges forming the internal right angle of the instrument called the square.

**INNINGS.** Land recovered from the sea.

**INNS OF CHANCERY.** Colleges in which young students formerly began their law studies.

**INNS OF COURT.** Four corporate societies in London, to one of which all barristers and students for the bar must belong; the buildings belonging to such societies.

**INODOROUS BITUMEN FELT.** Is about one-eighth inch thick and of a brown colour; used for various purposes, such as damp walls, bedding girders, laying under floors to deaden sound, etc., made thirty-two inches wide and in lengths up to thirty-five yards.

**INODOROUS PAINT.** Is mixed without any turpentine, the evaporation of which in ordinary paint causes a strong unpleasant smell.

**INSCRIBE.** To draw or delineate.

**INSERTED COLUMN.** One that is engaged in a wall. Same as Engaged Column.

**INSETS.** Are encroachments on a given space, such as the space occupied by a fireplace in a room.

**INSOLVENT.** Not able to, or not having sufficient to, discharge all liabilities; a debtor unable to pay his debts.

**INSTALLATION.** A set of apparatus, or arrangement of machinery or machines.

**INSTITUTION.** The building in which a society or association meets for the promotion of some particular object.

**INSTRUCT.** To furnish with orders or instructions; to teach; to inform.

**INSTRUCTION.** The act of instructing; order; direction; information.

**INSTRUCTOR.** One who instructs; a teacher; generally applied to a "technical" teacher.

**INSULA.** Literally, an island, a block of buildings surrounded on all sides by streets.

**INSULATE.** In electricity, to separate or isolate by a non-conducting substance.

**INSULATED.** Standing by itself; not being contiguous to other bodies; in electricity, separated by a non-conductor.

**INSULATED COLUMN.** One detached from a wall, so that the whole of its surface may be seen.

**INSULATION.** The act of insulating; state of being insulated, especially by a non-conductor.

**INSULATOR.** Any material which will isolate electrically in one conductor from another. India-rubber, ebonite, glass, cotton, silk, mica, "fibre" wood, etc., are used in practice.

**INSULATORS.** Substances possessing high resistance, such as glass, vulcanised rubber, paraffin, etc. When covering a wire along which an electric current is passing it prevents loss of power by induction, and makes wires heavily charged safer for handling.

**INSURANCE.** A contract by which a company, in consideration of a sum of money, becomes bound to indemnify the insured against loss by fire, etc.; the premium so paid; the act of insuring against loss.

**INTAGLIO.** In sculpture, etc., anything in which the subject is hollowed out, so that the impression from it would present the appearance of a bas-relief.

**INTAKE.** A Scotch term applied to a plinth or offset to a wall.

**INTAVOLATA.** See Cyma.

**INTEGER.** A whole number as distinguished from a fraction.

**INTEGRAL.** Whole, entire, complete; pertaining to an "integer"; an expression which being differentiated will produce a given differential.

**INTEGRAL CALCULUS.** A method of summing up differential qualities.

**INTEGRATE.** To find the integral of; to make complete, entire, whole.

**INTELLIGENCE DEPARTMENT.** A Government department which supplies information regarding military matters, etc.

**INTELLIGENCE OFFICE.** An office where such information may be obtained.

**INTENSITY.** The concentrated energy with which a force acts.

**INTENSITY OF STRESS.** Is the amount of stress on a given unit of surface, and is expressed in pounds or tons per square inch.

**INTERAXIAL.** Situated in an interaxis.

**INTERAXIS.** The space between the axis in columnar erections.

**INTERCEPTED AXIS.** In conic sections, that part of the diameter of a curve comprehended between the vertex and the ordinate; sometimes called the "abscissa".

**INTERCEPTION.** The cutting off of a portion of a sewer or a house

drain from a main sewer by means of a trap.

**INTERCOLUMNIATION.** Is the clear space between two columns, measured at the lower part of their shafts. When columns are attached to a wall, this space is not under such rigorous laws as when they are quite insulated. The different intercolumniations still retain their ancient appellation bestowed on them by the Greeks.

*Pycnostylos.* When the columns are one and a half of their diameter distant from each other.

*Systylos.* When their distance from each other is two diameters.

*Eustylos.* When their distance from each other is two and a quarter diameters.

*Diastylos.* When their distance from each other is three and a quarter diameters.

*Aræostylos.* When their distance from each other is four diameters or more.

The intercolumniation in the Doric order is regulated by the disposition of the triglyphs in the frieze.

**INTERDENTAL.** The space between two dentals.

**INTERDENTIL.** The space between two teeth or cogs.

**INTERFACIAL.** In geometry, included between the faces of two planes.

**INTERIOR AND OPPOSITE ANGLES.** A term signifying the two angles formed by a line cutting two parallels.

**INTERIOR ANGLES.** Same as Internal Angles, which see.

**INTERJOIST.** The space or interval between two joists.

**INTERLACING ARCHES.** Those, such as in an arcade, the mouldings of which intersect each other.

**INTERLIGNIUM.** In ancient architecture, the space between the ends of the tie beams.

**INTERMODILLION.** The space between two modillions.

**INTERMURAL.** Lying between walls.

**INTERNAL.** Inward; interior.

**INTERNAL ANGLE or RE-ENTERING ANGLE.** Is when the two faces are at right angles to each other, such as in skirtings, in the corner of a room.

**INTERPENETRATION.** A German mode of treating mouldings as though two or more sets of them existed in the same stone and they could pass through (interpenetration) each other.

**INTERPENSIVE.** Timbers in the roof of the cavædium, extending in a diagonal direction from the angles made by the walls of the court to the angles made by the junction of the beams supporting the roof.

**INTERPIASTER.** The space between two pilasters.

**INTERQUARTER.** The space between two quarters.

**INTERSECT.** To cut into each other; to cut mutually; to meet and cross each other.

**INTERSECT.** Said of mouldings when two pieces fit each other correctly.

**INTERSECTING VAULTS.** Vaults in which the surfaces cut or intersect one another.

**INTERSECTION.** The point of junction, as a mitre, etc.

**INTERSECTION or CROSSING.** The point in a church where the transepts cross the nave.

**INTERSECTION.** The point or line in which two lines, etc., or planes cut each other.

**INTERSPACE.** Intervening space.

**INTERSTICE.** A space between things near together, or between the component parts of a body.

**INTERSTITIAL.** Containing or pertaining to interstices.

**INTERSTRATIFIED.** Stratified between or among other strata.

**INTERTIE.** The name given to the horizontal piece of timber used in partitions; it (like the head and sill) runs from wall to wall, and also forms a head for the door posts; it is only used when the partition has to carry a floor above it; a short intermediate horizontal timber framed between two posts in order to tie them together.

**INTERVISIBLE.** Said of two sur-

veying stations each of which is visible from the other.

**INTRADOS.** The interior and lower line or curve of an arch, the exterior or upper curve is the "extrados".

**INTRAMURAL.** Within the walls, as of a city or university.

**INTRENCH.** To dig a trench around; to fortify with a ditch or parapet.

**INTRENCHMENT.** A trench; a ditch and parapet for defence.

**INTRUDE.** To force in, as a volcanic rock into sedimentary strata.

**INTRUSIVE ROCKS.** Igneous rocks which have forced their way through crevices in sedimentary strata, or have broken them up.

**INVENTORY.** A list or catalogue of goods and chattels; to draw up such a list.

**INVERSE PROPORTION.** The application of the rule of three in a reverse or contrary order.

**INVERSE RATIO.** The ratio of the reciprocals of two quantities.

**INVERSION.** The overturning of strata by igneous agency; the operation, in mathematics, of changing the order of the terms, so that the antecedent takes the place of the consequent and the reverse, in both ratios.

**INVERT.** To turn upside down; to place in a contrary position or order.

**INVERT.** The bottom of a circular or egg-shaped sewer.

**INVERT BLOCK.** The block of stoneware or concrete in which the invert of some sewers is formed and on which the brick sides are bedded.

**INVERTED.** In heraldry, turned the wrong way.

**INVERTED ARCH.** A segment arch turned upside down; it is used largely in foundation work, for distributing the weight over the whole length of the foundation.

**INVEST.** To lay out money, as in property, etc.

**INVESTMENT.** Money invested; that in which the money is invested.

**INVOICE.** An invoice is a more or less detailed statement of account furnished to a tradesman by his merchant; each item is generally priced separately.

**INVOLUTE.** A curve traced by the end of a string unwinding itself from another curve.

**INVOLUTION.** The act or process of raising a quantity to a given power.

**INVOLVE.** To raise to a given power.

**INWARD ANGLE.** The re-entrant angle of a solid.

**INWREATH.** To surround, as with a wreath.

**INWROUGHT.** Adorned with work or figures; wrought or worked in among other things.

**IONIC ORDER.** That order of architecture whose distinguishing feature is the ram's horn volute of its capital.

**ION, IONE.** A substance resulting from decomposition by electrolysis.

**IRIDESCENCE.** Exhibition of colours like those of the rainbow.

**IRIDESCENT.** Prismatic; rainbow like.

**IRIDIUM.** A tetrad metallic element obtained from dissolved crude platinum.

**IRIS.** The rainbow; an appearance resembling the rainbow.

**IRISCOPE.** An instrument for exhibiting prismatic colours.

**IRISED.** Containing colours like the rainbow.

**IRISH GRANITE.** Is of several varieties and colours; it is chiefly found in the counties of Down, Donegal, Wexford and Wicklow.

**IRISH SLATES.** Are of a dull bluish-grey colour, very durable, but thicker and heavier than Welsh slates; they are obtained from Killaloe.

**IRISH STANDARD OF TIMBER.** Contains 270 cubic feet.

**IRON AGE.** The third and last prehistoric age, when weapons and many implements began to be made of iron. The last of the four ages of the world described by Hesiod, Ovid, etc., in which oppression and vice abounded.

**IRON BOUND.** Bound or encircled with iron.

**IRON BOUNDING.** See Hoop Iron Bond.

**IRON CLAD.** Covered or plated with thick iron.

**IRON CONCRETE.** Consists of cast-iron turnings, asphalt, bitumen and pitch.

**IRON FILINGS.** Fine particles of iron made by filing or rasping.

**IRON FLINT.** A ferruginous variety of quartz.

**IRON FOUNDER.** One who makes iron castings.

**IRON FOUNDRY.** The place where iron castings are made.

**IRON GIRDER.** A built up wrought iron girder is formed by riveting various iron plates together; the sizes of the plates are regulated by the weight the girder has to carry.

**IRON FLITCH.** A term applied to an iron plate placed between two pieces of timber; the whole being bolted together is then known as a "flitched girder".

**IRON GREY.** Of the colour of iron just fractured.

**IRONMONGER.** One who deals or sells ironware or ironmongery.

**IRONMONGERY.** Hardware or such things as locks, bolts, hinges, screws, etc.

**IRON OAK** (*Quercus obtusiloba*). Is of small size, strong and durable; chiefly used for fencing, etc.

**IRON PYRITES.** The yellow brassy crystals found in slates which are not subject to decay.

**IRON SAND.** An iron ore in grains.

**IRON STONE.** An impure ore of iron containing much clay.

**IRON STRAPS.** Are of different forms, and are used for connecting timbers together, such as roof trusses, etc.

**IRON WOOD.** Is imported from the Brazils, the East and West Indies and other countries, in square and round logs; it is generally straight grained, of a dark brown or red colour, very hard.

**IRONWORK.** Anything made of iron.

**IRONWORKS.** An establishment where iron is manufactured, wrought or cast.

**IRRADIANCE, IRRADIANCY.** The emission of rays of light upon any object; that which is irradiated; that which irradiates.

**IRREGULAR COURSED RUBBLE.** See Sneaked or Squared Rubble.

**IRREGULAR FIGURE.** One whose sides and angles are unequal to each other.

**IRREGULAR MITRE.** Is a mitre other than forty-five degrees.

**IRREGULAR PENTAGON.** A pentagon having five irregular angles or sides.

**IRRIGATION.** The cleansing of sewage by passing it over cultivated land.

**IRRIGATION.** Watering the ground.

**ISAGON.** A figure whose angles are equal.

**ISCA.** An excrescence of the oak and hazel.

**ISCRINE, ISCRIN, ISCRITE.** Isometric titanic iron in the form of sand.

**ISLAND.** A raised pavement of small area in the centre of wide roads for the convenience of foot passengers while waiting for vehicles to pass.

**ISLE or ILE.** An old way of writing aisle or aile.

**ISOBAR.** A line on a map connecting places with the same mean barometric pressure.

**ISOBARIC, ISOBAROMETRIC.** Of equal barometric pressure; pertaining to isobars.

**ISOBATHYTERM.** A line touching points on the earth's surface where the temperature is the same at equal depths.

**ISOCHEIM.** An isochimal line.

**ISOCHIMAL, ISOCHEIMAL, ISOCHIMENAL.** Marking equal winters.

**ISOCHIMENAL.** Lines on a map over places having the same winter temperature.

**ISCHROMATIC.** Of the same colour.

**ISODOMON.** A building every way straight; a term sometimes used in masonry when the courses are of equal thickness.

**ISODOMOS.** In Greek architecture, masonry cut and squared to the same height, so that, when laid, the courses were all regular and equal.

**ISODYNAMIC.** Having equal force; of equal size.

**ISOGEOTHERMAL, ISOGEOTHERMIC.** Connecting those places having the same mean temperature of the soil.

**ISOLATE.** To insulate; to place in a detached situation.

**ISOLATION HOSPITAL.** A hospital for isolating persons having infectious diseases.

**ISOMETRIC.** Equal in measure; tessular.

**ISOMETRIC PROJECTION.** Is a system of projection or perspective whereby length, breadth and thickness of an object can be shown in one drawing alone.

**ISOPERIMETRICAL.** In geometry, such figures as have equal perimeters or circumferences.

**ISOPERIMETRY.** The science of figures having equal perimeters or boundaries.

**ISOSCELES TRIANGLE.** A triangle having only two sides equal.

**ISOTHERMAL.** Having an equal degree of mean annual warmth.

**ISOTHERMAL LINES.** Lines on a globe or map passing over places having the same mean temperature.

**ISSUANT.** In heraldry, issuing out.

**ITALIAN CORRUGATED ZINC.** Consists of zinc having single corrugations about fifteen inches apart; when laid a rafter is placed beneath each corrugation.

**ITALIAN OAK or SARDINIAN OAK.** Is of a brown colour, hard, tough, strong, difficult to work, and is subject to splits and shakes in seasoning; free from defects; extensively used in shipbuilding.

**ITALIAN TILING.** A roof tiling in which the joints between the lower flat tiles are covered with half round capping tiles.

**IVORIDE, IVORINE.** A composition resembling ivory and used as a substitute.

**IVORY.** The hard white substance composing the teeth of the elephant, narwhal, etc.

**IVORY BLACK.** When properly burnt is intensely black and is produced by calcining waste ivory in close vessels and afterwards ground.

**IVORY TURNER.** A worker or turner in ivory.

## J.

**JACK.** A portable machine for raising great weights through a small space; a horse or wooden frame on which wood or timber is sawed; a large-forked stick.

**JACK.** A measure, sometimes a half, sometimes a quarter of a joint.

**JACK.** A gad; a wooden wedge.

**JACK ARCH.** One whose thickness is only of one brick.

**JACKET.** A covering to prevent radiation of heat.

**JACK-IN-A-BOX.** A large wooden male screw turning in a female one.

**JACK PLANE.** A plane about eighteen inches long for preparing wood for the trying plane, or for preliminary work in planing.

**JACK PUMP.** A common pump having the barrel open at the top and discharging directly into the spout.

**JACK RAFTER.** The short rafter fixed from the eaves to the hips of a roof.

**JACK RIBS.** Those in a groined or in a polygonally domed ceiling that are fixed upon the hips or angle ribs or groins.

**JACK SCREW.** A lifting implement worked by a screw.

**JACK SMITH.** A smith who makes jacks for chimneys.

**JACK TIMBER.** Any timber interrupted in its length, or cut short; any timber that is shorter in length than others used in the same range.

**JACK WOOD.** Is obtained from the jaca tree of India; imported in logs from three to five feet in diameter; coarse and crooked in grain.

**JACOBAN STYLE OF ARCHITECTURE.** That from 1603 to 1641; an admixture of classical with all kinds of Gothic or pointed.

**JACOB'S LADDER.** A rope-ladder with wooden steps.

**JACOB'S STAFF.** A cross staff; an instrument for measuring distances and heights.

**JADE.** A massive, sometimes crypto-crystalline, silicate of magnesia; formerly much used for ornamental purposes.

**JAG.** To cut into notches or teeth like those of a saw; serrated.

**JAIL.** A prison; a building or place for the confinement of persons arrested for crime.

**JALOUSIE or SHUTTER.** A venetian blind; a frame hung on hinges similar to an external shutter, and filled in with small louvres; sometimes called a "venetian shutter".

**JAMB.** The side of a door, chimney breast, window, etc.; the post of a door frame.

**JAMB HEAD.** The soffit of a door, window, etc.

**JAMB LINING.** The wood lining at the side of a doorway covering the sides of the jambs or openings through walls, such as doorways.

**JAMB POST.** The perpendicular post of a door frame; in wood partitions, those used at the side of a door to which the jamb linings are fixed.

**JAMB STONES.** Those used in stone walls at the sides of apertures, in which every alternate stone should go entirely through the thickness of the wall.

**JANTU.** A machine used in India to raise water in irrigation.

**JANUA.** Among the Romans, the street door or entrance of a private house.

**JAPAN.** Consists of ordinary lead paint ground in oil and mixed with copal or anime varnish; work varnished and figured in the manner practised by the natives of Japan; to cover with a thick coat of hard brilliant varnish; the varnish used.

**JAPANNER.** One whose business is to japan goods.

**JAPANNER'S GOLD SIZE.** Consists of boiling gum anime in linseed oil with driers.

**JAPANING.** Consists in applying successive coats of japan; each coat is dried individually at the highest temperature it will bear without melting; two to six coats of the best copal or anime varnish without driers are then applied to the surface; common japanned work is not dried

by heat but simply painted and varnished.

**JARDINIÈRE.** An ornamental stand for flowers in a room.

**JARRAH or AUSTRALIAN MAHOGANY** (*Eucalyptus marginata*). Is obtained from West Australia; it is of a red colour, very brittle, close wavy grain, full of defects like cupshakes, deficient in strength and tenacity, subject to shrink and warp if exposed to the sun; used for wood paving, dock gates, piles, etc., imported in logs from twenty to forty feet long and eleven to twenty-four inches square.

**JASPER.** A variety of quartz which admits of an elegant polish.

**JAW.** One of two opposing members capable of being moved toward and from one another.

**JAW BOX.** Scotch term for a lead-lined sink.

**JENNY LIND.** Is the name given to a granite polishing machine of American origin; one man can do about seventy feet of polishing a week with it.

**JERKIN HEAD ROOF.** Is a roof the end of which is fashioned into a shape intermediate between a gable and a hip.

**JERRY BUILDER.** A speculative builder of houses of the lowest class.

**JERRY BUILT.** Unsubstantially built; constructed hastily and of bad materials.

**JESSE.** A large branching candlestick in churches; so called from its spreading out like the genealogical tree of Jesse.

**JESSE WINDOW.** A window in which the tracery and glazing represent a genealogical tree of Jesse.

**JET.** A tube for running melted metal into a mould; spouting and shooting as of water or flame; the pipe where it issues; a gas jet.

**JET BLACK.** Of the deepest black.

**JET D'EAU.** A French term for a fountain that throws up water to some height in the air.

**JETTY or JETTEE.** A pier projecting out into the water, or that part of a building that projects

beyond the rest and hangs over the wall below, such as bay windows, pent houses, turrets at the corners, etc.

**JETTY.** A projecting erection into the sea, similar to a pier; generally constructed of timber.

**JETTY HEAD.** The projecting part at the end of a wharf.

**JEWEL HOUSE or JEWEL OFFICE.** The place where the royal ornaments are deposited.

**JEWRY.** A district, street, place or locality in which Jews formerly resided.

**JEW STONE.** A local name for a black basalt found on the Clee Hills, Shropshire.

**JIB.** The projecting arm of a crane, or a triangular frame with a pulley at the end, for the chain to pass over which leads from the crane.

**JIB CRANE.** See Movable Derrick.

**JIB DOOR.** A door so constructed as to have the same continuity of surface with that of the partition or wall in which it stands, so as not to be noticeable when shut.

**JIGGER.** A sieve shaken vertically in water to separate the contained ore; the man using it; a potter's wheel on which earthen vessels are shaped; a bandsaw.

**JIGGING.** In Cornwall, a method of dressing the smaller copper and lead ores by the motion of a wire sieve in a kieve or vat of water.

**JOB.** A piece of work, especially that of a temporary nature; a small contract.

**JOBGING.** Repairing work.

**JOBGING BUILDER.** A builder whose work consists largely of repairs or small jobs.

**JOGGLE.** A term sometimes applied to the set in a piece of wrought iron or steel which alters the level of two portions.

**JOGGLE.** The joints of hard stones or other masses so indented that the adjacent stones fit in; to indent as at the jointings of stones or timber to prevent sliding.

**JOGGLED or KEYED BEAM.** Consists of two pieces of timber bolted together and prevented from sliding

by hardwood keys driven in at right angles to the beam and in the centre of the joint.

**JOGGLE JOINT.** In masonry, is when the stones are rebated one in the other, or if one is grooved and the other tongued it is also called a "joggle joint". It is rather too expensive to be often used; frequently used for stone landings. The term "joggle" is used in various senses by masons, as almost every sort of jointing in which one stone is let or fitted into another is called a "joggle"; what a carpenter or joiner would call a rebate, in wood, a mason would call a joggle, in stone.

**JOGGLE PIECE.** Is a truss post with shoulders and sockets for abutting and fixing the lower ends of the struts.

**JOHNITE.** A hydrated sulphate of uranium and copper, of emerald to apple green colour.

**JOINER.** The artisan who joins wood by glue, framing or nails, for the finishings of a building; a bench hand.

**JOINERY.** Is the constructive woodwork of a building, the ornamental or luxurious part, such as fittings, etc.; the art of a joiner.

**JOINT.** To plane and prepare (as boards) for jointing.

**JOINT.** The surface of separation between two bodies brought into contact and held firmly together by weight, mortar, glue, etc.

**JOINT.** The interstices between bricks or stones; the horizontal joints are called the "bed joints" or "coursing joints"; the vertical joints being sometimes called "builds".

**JOINTED.** In brickwork, is when each mortar joint has a slight groove running along its surface to give a neat appearance.

**JOINTER.** The largest plane used by the joiner in straightening the edges of boards, etc., for joints.

**JOINTER.** Used by bricklayers, is a crooked piece of iron forming two curves of a contrary flexure by its edges on each side; used for drawing by the aid of the jointing rule, the coursing and vertical joints of the brickwork.

**JOINTING RULE.** Is a piece of wood about five feet long and three inches wide, bevelled off to an edge; used for floating plaster in the angles or corners of rooms, etc.; also used by bricklayers for the direction and course of the jointer in the horizontal and vertical joints of brickwork.

**JOINTING TOOLS.** Are thin triangular steel plates of various sizes fitted with a handle at the back and brought to a very acute angle at the point; used for finishing off mitres, etc., of plaster mouldings.

**JOINT STOCK COMPANY.** A company carrying on some undertaking, in which the shares of each member are transferable without the consent of the other partners.

**JOINT TENANCY.** A tenure of an estate by unity of interest, title, time and possession.

**JOINT TENANT.** One who holds an estate by joint tenancy.

**JOINTURE.** An estate in lands or tenements settled upon a woman in consideration of marriage, and which she is to enjoy after her husband's decease.

**JOISTS.** Are the horizontal timbers of a floor on which the floor boards are laid; ceiling joists are the small timbers which sustain the ceiling; the latter is only used in first-class work.

**JOSS.** A Chinese idol.

**JOSS HOUSE.** A Chinese temple.

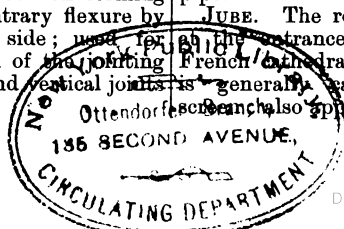
**JOSS STICK.** A perfumed stick burnt before idols in China.

**JOURNAL.** The bearing portion of the shaft in machinery.

**JOURNEYMAN.** An artisan who has served his apprenticeship and properly learnt his trade.

**JOVAL TURBINE.** Is an axial or parallel flow turbine, the water passing through the motor in directions parallel to the central shaft; works by pressure, and may be drowned or connected to a suction pipe.

**JUBE.** The rood, loft or screen for the choir entrance to the choir of French cathedrals. In England it rule, the coursing and vertical joints is generally called the chancel screen. Also applied to the lectern.



**JUDAS HOLE.** A small hole cut in a door to pry secretly into a chamber.

**JUDGMENT DEBT.** A debt secured by a judge's order, under which an execution can be levied at any time.

**JUDGMENT HALL.** The hall where courts are held.

**JUDGMENT SEAT.** The seat or bench on which the judges sit; a court or tribunal.

**JUFFERS.** A term formerly applied to pieces of timber four or five inches square.

**JUGUMENTUM.** The lintel of a door.

**JULE or JOULE.** The union of heat and work which is expended in forcing one coulomb through one ohm. It equals 7373 foot-pound.

**JUMP.** An abrupt rise in a level course of brickwork or masonry to accommodate the work to the inequality of the ground; a step in a foundation.

**JUMP.** In quarrying, the dislocations of the strata in quarries.

**JUMPER.** A tool used by masons; it is chisel pointed, and slightly round nosed, and is wider at the cutting edge than the diameter of the tool; chiefly used for cutting circular holes in granite; also used

in quarries for breaking a way through hard rocks by percussion.

**JUMP JOINT.** Is when iron plates in girders, etc., are planed square at their edge and brought into close contact throughout their width.

**JUNCTION.** The point or place of union, especially the point where two or more lines of railway meet.

**JUNCTION.** Any pipe, as a drain or gas pipe, etc., having a branch, generally at an acute angle. It is termed a "single junction" when having a branch on one side only, and a "double junction" when having branches on both sides. It is called a **T** piece when the branch is at right angles with the main pipe.

**JUNCTURE.** The point or place of union; a joint; the line at which two things are jointed.

**JUNIPER.** An aromatic and very durable kind of wood.

**JUNK.** Old cordage used for packing, etc.

**JUNKERITE.** Spathic iron ore.

**JUNK RING.** A steam-tight packing round the piston of a steam engine.

**JUT.** To project beyond the main body; a projection.

**JUT WINDOW.** A window that projects from the line of a building.

## K.

**KABOOK.** A clay iron-stone found in Ceylon.

**KAGE.** A term formerly applied to chantry chapels enclosed with lattices or screen work.

**KALE YARD.** In Scotland, a kitchen garden.

**KALI.** A species of glass wort, the ashes of which are used in making glass.

**KALSOMINE.** A kind of paint, without oil, used on the walls of rooms, etc.

**KAMPTULICON.** A floor-cloth composed of cork and india-rubber, or a substitute for this.

**KAOLIN.** Porcelain clay, composed of silica and alumina from decomposed feldspar; the porcelain earth of the Chinese.

**KAPITIA.** A resinous kind of lacquer obtained from Ceylon.

**KARPHOLITE.** A fibrous mineral of a straw yellow colour, consisting of silica, alumina and manganese.

**KARPHOSIDERITE.** The hydrated phosphate of iron.

**KAURIE, COWRIE or COWDIE PINE** (*Dammara Australis*). Is found only in New Zealand; the heart-wood is yellowish-white, fine and straight in grain with a silky lustre on surface; it is generally free from defects, strong, light, elastic and durable, is less liable to shrink than most pines or firs.

**KAWN.** In Turkey, a public inn.

**KAZER.** In Cornwall, a sieve.

**KEBLAH or KIBLEH.** The point in a mosque designating the direction

of the temple of the Mohammedans at Mecca.

**KEEL.** The fillet, raised edge or sharp arris formed on roll mouldings, by which the heaviness of the large ones is relieved; the fillet or projection forming part of a scroll moulding.

**KEELER.** A shallow tub.

**KEENE'S CEMENT.** A cement manufactured by recalcining plaster of Paris with different substances; chiefly used for interior work.

**KEEP.** A strong tower in the middle of a castle; the chief tower or dungeon of a Norman castle.

**KEEPER.** In Scotland, the staple for a bolt.

**KEEPER PLATE.** A Scotch term for the striking plate of a cupboard lock.

**KEEPING.** In painting, a due proportion of light and shade.

**KEEPING THE PERPENDS.** See Perpend.

**KEESH.** Flakes of the carburet of iron.

**KEG.** A small cask or barrel.

**KELK.** A large detached stone.

**KELP.** The calcined ashes of seaweed, from which carbonate of soda is obtained; the seaweed from which "kelp" is produced

**KENNEL.** A house or stable for dogs or a pack of hounds; the water-course of a street; a little channel.

**KENTISH RAG.** A limestone of the lower greensand found in Kent; used for external work.

**KEP.** Scotch term for a door step.

**KERB or KERLSTONE.** See Curb.

**KERF.** A heap of brick earth left to weather.

**KERF or KERP.** A saw cut made in wood; the space which a saw makes in dividing a piece of wood into two or more parts.

**KERMES LAKE.** An ancient pigment.

**KERNED.** A term applied to a heap of copper ore hardened by lying exposed to the sun.

**KEROSENE.** An oil obtained in America from bituminous minerals; used for lamps, etc.

**KEUPER.** The upper portion of the new red sandstone.

**KEVEL.** A stonemason's hammer having a blade and point.

**KEY.** Moist plaster passing through laths form protuberances at the back, which harden and form what is termed the "key".

**KEY.** A ledge of rocks near the surface of the water; a tool for jointing brickwork; the central stone of an arch which binds it; a fillet of hard wood fitted into opposite grooves in two pieces of timber to prevent their sliding; also applied to a hardwood wedge; used to tighten up a scarf joint.

**KEY.** In joinery, a tapered piece fitting into a dovetail groove, so as to allow framing to shrink, but not to warp; in laying a floor "folding," the last board laid is called a "key"; a cotter.

**KEYED.** Furnished with a key.

**KEYED BEAM.** A built up beam similar to an indented beam, but having keys instead of indents.

**KEYED DADO.** That which has keys of wood grooved into it across the grain at the back to prevent it warping.

**KEYED JOINTS.** In brickwork, are those formed by drawing a curved iron key or jointer along the centre of a flush joint, thus forming a groove.

**KEYED MITRE JOINTS.** A mitred joint strengthened by inserting thin strips of wood glued into saw cuts across the mitre.

**KEYED STRUTTING.** The strutting between floor joists, mortised and tenoned to the joists and secured by wood keys.

**KEY HOLE.** The aperture in a door or lock for receiving a key.

**KEY HOLE SAW or PAD SAW.** A small saw that slides up into its handle; used by joiners for cutting out small holes, such as key holes, etc.

**KEY OF A FLOOR.** Is the board last laid down.

**KEYS.** In naked flooring, are pieces of timber fixed in between the joints by mortise and tenon.

**KEYS.** Are tapering pieces of wood let into a wide dovetail groove across the grain of a wide board to prevent it warping.

**KEY SEAT.** A groove to receive a key.

**KEY STONE.** The centre stone or voussoir in the crown of an arch. It is the last placed in its position to complete the construction of the arch.

**KIBBLE.** An iron bucket for raising ore by a mine shaft to the surface.

**KIBLA.** The most sacred part of a Mohammedan mosque.

**KICK.** A carpenter's saw is said to "kick" when it digs into the wood; caused by the teeth having too much "hook".

**KICKING STRAP.** A "heel strap" to secure the foot of a principal in a truss.

**KID.** A faggot; a bundle; a heath of furze.

**KIKEKUNEMATO.** A fine varnish.

**KILDERKIN.** A small barrel; eighteen gallons.

**KILKENNY MARBLE.** A fine black marble, full of shells and coralloid bodies.

**KILLAS.** A clay slate among the Cornish miners.

**KILLED.** A spirit is said to be "killed" if it is diluted. Plumbers have to "kill" spirits of salts, if it is in a raw state, before they can use it.

**KILLED.** The knots in wood are said to be "killed" when they are painted over with knotting or other methods.

**KILLEFE.** Formerly, a gutter, groove or channel.

**KILLING KNOTS.** See Killed.

**KILLING WIRE OR CORD.** Stretching it so as to prevent, as far as possible, any further lengthening in use.

**KILLINITE.** A hydrated silicate of alumina, potash and protoxide of iron.

**KILLOW.** A blackish earth.

**KILN.** A furnace for burning bricks and tiles, also limestone or chalk to make lime; a place for drying malt or hops.

**KILN BURNT BRICKS.** Are bricks which are burnt inside a rough open topped brick building with thick walls and fire holes at the bottom along each side.

**KILN-BURNT CLAY.** Is partially vitrified and all the water is driven off, the material being so altered in character as to be incapable of solution in water. This is the theory of brickmaking.

**KILN DRY OR DRIED.** To dry or dried in a kiln.

**KILN HOLE.** The mouth of a kiln.

**KILOGRAMME.** A French measure of weight = 1,000 grammes, about 2½ pounds avoirdupois.

**KILOLITRE.** A French liquid measure = 1,000 litres, or 220 gallons.

**KILOMETRE.** A French measure of distance = 1,000 metres, about five-eighths of a mile.

**KILOSTERE.** A French solid measure = 1,000 cubic metres, 35,316·6 English cubic feet.

**KILT.** A Scotch term applied to stone steps, slightly weathered, or set with a slight inclination outwards.

**KILVIN DRY SIZE.** Is sold in a powder, becomes gelatinous on cooling after a few minutes' boiling; colourless and odourless; will not affect delicate tints; can be kept several days in the hottest weather.

**KIMMERAGE CLAY.** A blue and greyish-yellow clay of the oolite formation; found in abundance at Kimmeridge, in the Isle of Portland.

**KINEMATICS.** The science of pure motion, admitting conception of time and velocity but excluding that of force.

**KINETICS.** That branch of dynamics which treats of forces imparting motion to or influencing motion already imparted to bodies.

**KING AT ARMS.** In heraldry, one of three officers of great antiquity, who direct the heralds, preside at their chapters, and have jurisdiction of armoury.

**KING CLOSER.** The piece left after cutting off the corner of a brick two and a quarter one way and four and a half inches the other way.

**KING HEAD.** The enlarged and shouldered top of a king post.

**KING POST.** The centre or chief post in a king post roof truss or principal, standing on the tie beam and reaching up to the ridge.

**KING POST ROOF TRUSS** or **PRINCIPAL.** Has framed timbers consisting of a tie beam, king post, principal rafters and struts; they are used in spans up to thirty feet. The distance between the principals should never exceed twelve feet.

**KING ROD** or **KING BOLT.** A term applied to the rod of iron taking the place of the king post in iron roofs; also called "king bolt".

**KING'S YELLOW.** A yellow pigment consisting essentially of sulphide of arsenic; it injures several other colours when mixed with them; it is not durable and is a dangerous pigment to use in internal work; also known as "Chinese yellow," "arsenic yellow" and "yellow orpiment".

**KINGWOOD.** A beautiful hard wood imported from Brazil in trimmed logs; also called "violet wood".

**KINK.** The spontaneous twist in a rope or chain.

**KINOLOGY.** That branch of physics which treats of the laws of motion.

**KIOSK.** An open summer-house; an ornamental portable structure for the sale of newspapers, etc.

**KIRK.** In Scotland, a church.

**KIRTLE.** A quantity of flax, about 100 pounds.

**KISH.** A carbonate of iron which floats upon the surface in the furnace.

**KIT-CAT.** A canvas, twenty-eight or twenty-nine by thirty inches; used for portraits.

**KITCHEN.** The room of a house appropriated to cookery.

**KITCHEN DRESSER.** A frame with shelves, drawers and cupboards for keeping crockeryware, etc., more or less ornamental.

**KITCHENER.** A close cooking range.

**KITCHEN GARDEN.** A garden in which vegetables are cultivated for the table.

**KITCHEN HOUSES.** A term applied in some districts to small dwelling houses having no front sitting-room or parlour.

**KITCHEN RANGE** or **KITCHENER.** A fire grate and stove with oven, boiler, etc., for cooking; the smoke from the fire being carried away by flues at the back.

**KITE SHAPED.** A term used to denote an ancient form of shield represented in the Bayeux tapestry.

**KNAG.** A knot in wood; a peg.

**KNAP.** To break or split by a quick sharp blow as opposed to crushing.

**KNAR KNARL.** A knot in wood.

**KNEE.** In handrailing, is the convex part of a sudden rise in the rail.

**KNEE.** A piece of timber cut at an angle or having grooves to an angle.

**KNEE.** A term sometimes used for the return of the dripstone at the spring of an arch.

**KNEED BOLT.** A door bolt cranked thus, —; also called a "necked" bolt.

**KNEE HOLE TABLE.** A writing table with a space in the centre for the knees.

**KNEELER** or **KNEE STONE.** A term applied in masonry to a stone used in the gable end of a building; the kneeler has a piece worked on it to match the coping which projects about two inches over the wall; it is throated and slightly bevelled to throw the water on to the slates so as not to injure the wall. The "footstone" is also sometimes called a "kneeler".

**KNEE PIECE** or **KNEE RAFTER.** An angular piece of timber to which other pieces in the roof are fastened.

**KNITS.** Small particles of lead ore.

**KNOBBLING.** The process of knocking off rough pieces of stone.

**KNOCKER.** A kind of hammer, more or less ornamental, fastened to a door for knocking.

**KNOCKINGS.** Lead ore with spar as cut from the veins.

**KNOP.** A knob; a button; a bunch of leaves, flowers or similar ornament.

**KNOT** or **KNOB**. A bunch of leaves or flowers as the bosses at the ends of a label or at the intersection of ribs; a boss.

**KNOT OF SASH CORD**. Contains twelve yards.

**KNOTS**. In timber are of two kinds—live and dead. In some of the fancy woods they are of great beauty, but in pine and deal they are liable to exude resinous matter, frequently months after the work has been painted. See **Live Knots** and **Dead Knots**.

**KNOTTING**. Is a liquid consisting of shellac and methylated spirits; it is used for painting the knots in woodwork before it is painted. Any composition used to cover knots previous to painting. To "knot" in painter's work is to

apply the above liquid on the knots, previous to painting.

**KNOTTY**. Full of knots.

**KNUCKLE**. The joint of a cylindrical form, with a pin as its axis, by which the straps or wings of a hinge are fastened together.

**KNUCKLE JOINT**. A hinged joint that will only open to 180°.

**KOS**. A Jewish measure of capacity of about four cubic inches.

**KREM'S WHITE**. A white carbonate of lead; also called "Vienna white," "crems" or "kremnitz white".

**KUNKUR**. A nodular limestone in India.

**KYANIZING**. A method to prevent the rotting of wood by immersing it in a solution of corrosive sublimate; so called from Kyan the inventor.

## L.

**L**. As a numeral, L stands for fifty; lb., for pound or pounds (weight).

**LABEL**. In heraldry, a fillet, with pendants or points, added to the family arms by an eldest or only son while his father is still living.

**LABEL**. In Gothic architecture, the drip or hood moulding over an opening when it is returned square. In painting, a small parallelogram painted black or white for receiving writing.

**LABEL**. A brass rule with sights; formerly used to take altitudes.

**LABOUR**. A term employed to denote the value of a piece of work in consideration of the time bestowed upon it.

**LABOURER**. One who performs work requiring manual labour but little skill.

**LABOUR ONLY**. Implies that all materials are supplied to the contractor, also the scaffolding.

**LABOUR SAVING**. Calculated to diminish or do away with manual labour.

**LABYRINTH**. A sinuous channel in which the ground ore (slime) and water are conducted, that the metallic portions may be deposited.

**LABYRINTH**. Intricate and winding walks in a garden; a series of hedges, mounds or walls with numerous winding passages.

**LABYRINTH FRET**. A fret with many turnings in the form of a labyrinth.

**LAC**. Is a resinous substance which exudes from several trees found in the East Indies; one of the ingredients of varnish; very soluble.

**LACHRYMATORY**. A small glass vessel found in ancient tombs, and said to be intended for holding tears; their real use was to hold perfumes or ointments.

**LACING COURSE**. A course of brickwork built into a rubble wall, or it may be a course of bricks built in bond to unite the rings of an arch.

**LACONICUM**. Among the ancients, the semicircular end of a bath; a circular stove.

**LACQUER**. A varnish, usually a solution of shellac in alcohol; applied upon brass and other metals to preserve them from tarnishing, and to improve their colour.

**LACTARIUM**. A dairy house; a column in the Roman market where foundlings were fed.

**LACUNAR.** The ceiling or under surface of the member of an order; panels or coffers in the ceilings of apartments; the underside of the larmier or corona of a cornice; the underside of the architrave between the capitals of the columns. The term lacunar is only applied when the ceiling or soffit consists of apartments sunk or hollowed, without spaces or bands between the panels; it is called "laquear" when with bands.

**LACUNAR.** An arched roof or ceiling, more especially the planking or flooring above the porticos.

**LACUNARIA.** The ceiling of the ambulatory around the cella of a temple or of the portico. The beams extending from the walls to the entablature being intersected by others ranged longitudinally.

**LACUSTRAL, LACUSTRINE.** Of or pertaining to a lake.

**LACUSTRINE DEPOSITS.** Strata deposited in lakes.

**LADDER.** In blind making, two broad tapes with cross pieces of smaller size, for the support of the "slats".

**LADE.** A passage of water; the mouth of a river; a mill-race.

**LADING.** The act of loading; a load, a cargo.

**LADLE.** A pan with a handle to hold molten metal; the float board of a mill-wheel.

**LADKIN, LADAKIN or LATTERKIN.** A tool used in lead light glazing to open the calmes without causing them to rivel; it is made of box or bone about five inches long, one inch wide and three-eighths of an inch thick, with all the sharp arrises at one end rounded off.

**LADIES.** Slates of the following sizes, 16 × 10, 16 × 8, 14 × 10, 14 × 8. They are sold by the thousand of 1,200.

**LADY CHAPEL.** A small chapel, generally in ancient cathedrals, placed behind the high altar; usually dedicated to the Virgin Mary.

**LAGGING.** The non-conducting jacket of a steam boiler or cylinder.

**LAGGINGS.** A term applied to the narrow strips of wood nailed on

the outside edge of centres for turning arches.

**LAI D IN.** Same as Planted.

**LAI D PAPER.** Paper made with a ribbed surface marked by the wires on which the pulp is laid.

**LAI D WORK.** Or one coat work, is the name used in plastering when only one coat of coarse stuff is laid on stone or brickwork to receive lime whitening or colouring; it is usually done in cellars, etc.

**LAINES.** Courses laid in the building of walls.

**LAITANCE.** A term applied by French engineers to a pulpy gelatinous fluid that is washed from the cement and rises to the surface when concrete is deposited in water; it is more abundant in salt than in fresh water; it causes it to appear of a milky hue.

**LAKE.** An extensive collection of water, surrounded by land, produced by nature or artificially.

**LAKE.** A pigment made by precipitating coloured vegetable tincture by means of alum and carbonate of potash; the alumina combines with the organic colouring matter and separates it from the solution.

**LAKE DWELLERS.** The prehistoric inhabitants of lake dwellings.

**LAKE DWELLINGS.** Prehistoric dwellings built on piles in lakes; applied also to those of modern times.

**LAKE SETTLEMENT.** A collection of lake dwellings.

**LAMB'S TONGUE.** A moulding composed of a simple concave and convex curve; frequently used for sash stuff.

**LAMETTA.** Gold, silver or brass foil or wire.

**LAMINA.** The extremely thin plates or layers of metal which compose the solid metal.

**LAMINABLE.** A term applied to metal which may be extended by passing it between steel or hardened (chilled) cast-iron rollers.

**LAMINATED.** Disposed in layers or plates; when metal carrying in extended in all directions by the hammer, it is said to be "leable," and when for goods.

the rolling press, it is said to be "laminable".

**LAMINATED LEAD.** A very thin description of sheet lead used for covering damp walls.

**LAMINATED RIBS.** Consist of layers of planks placed flatwise and bent to the curve required and bolted together.

**LAMP.** A vessel to give light, generally by burning oil with a wick.

**LAMPBLACK.** The soot, used as a pigment, obtained by burning small coal, tallow, coal-tar, resin, oil or resinous woods. It is in the form of a fine powder of a dense black colour, works smoothly but dries badly in oil.

**LAMP GLASS.** The upright glass tube or chimney for a lamp.

**LAMP HOLE.** A small bore pipe rising from a sewer to surface, down which a lamp may be lowered, that its light may be seen from manholes some distance off.

**LAMPION.** A small lamp.

**LAMPLIGHTER.** One employed to light the public lamps.

**LANA.** A close-grained wood exported from Demarara.

**LANCET.** A high and narrow window pointed like a lancet.

**LANCET ARCH.** That in which the rise above the springing is greater in proportion to the width; therefore the radius for the curves is greater than the width of opening; a narrow-pointed Gothic arch.

**LANCET WINDOW.** A high, narrow window with a very pointed arch.

**LANCE WOOD** (*Duguetia quitirensis*). A tough, elastic wood of a paler colour than boxwood, imported in long poles from three to six inches in diameter from Cuba and Jamaica; used for shafts, surveyors' rods; etc.

**LAND.** Ground; soil; real estate; a country or district.

**LAND AGENT.** One who manages land for the proprietor.

**LABYRINTH.** Having an estate in which the ground consists of real estate. In staircasing, are water are on form resting places metallic portions, or one of which

is the termination of the staircase. There are three kinds of landings, viz., "quarter space," "half space" and "level" landings.

**LAND JOBBER.** One who speculates in land.

**LANDMARK.** A mark to designate the boundary of land.

**LAND MEASURING.** The art of computing the superficial area of land.

**LAND OFFICE.** An estate office; an office in which the sale or letting of new land is registered.

**LANDOWNER.** A proprietor of land.

**LANDREEVE.** An assistant to a land steward.

**LAND RENT.** Rent paid for the use of a farm.

**LANDSCAPE GARDENING.** The art of laying out grounds, and arranging trees, shrubbery, etc., so as to produce the most pleasing effect.

**LANDSCRIP.** A certificate of the purchase of public land.

**LANDSLIP, LANDSLIDE.** The sliding down of a considerable portion of earth from a higher to a lower level; the earth which so slips.

**LAND SPRING.** A spring of water which comes into action only after heavy rains.

**LAND STEWARD.** A person who has charge of a landed estate.

**LAND SURVEYING.** The art of measuring and mapping out land.

**LAND SURVEYOR.** One who measures and draws plans of landed estates, etc.

**LAND TAX.** A tax assessed on land and building.

**LAND TIES.** Are long iron rods which connect the face of a wall with a mass of masonry, for giving additional resistance to retaining walls, etc.; sometimes the ties are fastened, by various means, to a distance behind the walls.

**LANTARY.** A slaughter house; shambles.

**LANTERN.** The upper member of a lighthouse containing the light.

**LANTERN.** The internally polygonal tower over the intersection of the nave with the transepts of a church.

**LANTERN.** A small structure either drum shaped, square, circular, elliptical, or polygonal, on the top of a dome, or on that of an apartment to give light and ventilation; an ornamental skylight; also called "lantern light".

**LANTERN.** In mechanics, a kind of pinion on which the teeth of the main wheel acts.

**LANTERN WHEEL.** A wheel which acts as a pinion to the spur wheel.

**LANYARD.** A short piece of rope used for fastening or stretching.

**LAP.** A loose overhanging flap; that part of one body which lies on and covers another; in slating, the distance which one course of slates covers the next course but one.

**LAP.** A wheel, disc or piece of soft metal used to hold polishing powder; the overlay of a stone in a wall on its bed stone; to polish with "lap".

**LAP DOVETAIL JOINT.** One in which the pins on one board do not extend entirely through the piece at right angles to it; chiefly used in drawer fronts.

**LAPILLI.** Volcanic ashes, consisting of small, angular, stony or slaggy fragments.

**LAP JOINT.** A joint formed by the material overlapping one another.

**LAP JOINT.** In lead laying, is formed by lapping the lead one over the other from a space of two to six inches wide or as required.

**LAPIS-LAZULI.** Azure stone, an aluminous mineral of a rich blue colour which furnishes the valuable pigment called ultramarine.

**LAPIS-LYDIUS.** Touchstone; a variety of silicious slate.

**LAPIS-PUMEX.** Pumice stone.

**LAPPING.** A method of wrapping a piece of tow round a bolt under the head of the nut to make a water-tight joint.

**LAPPIOR.** One who dresses refuse ore.

**LAQUE MINÉRALE.** A French pigment, a species of chromic orange; also applied to orange oxide of iron.

**LARAIUM.** An apartment in ancient architecture where the lares or household gods were deposited; also the statues of the proprietor's ancestors.

**LARAMIC BEDS.** A group of upper cretaceous or transition beds in the western regions of the United States.

**LARCH** (*Larix Europæa*). Is found in various parts of Europe, the best in Russia; it is of a honey yellow or brownish-white in colour, the hard part of each ring being generally of a redder tint. Of the two kinds found in England one is of a yellowish-white, cross grained and knotty, the other is of a reddish-brown colour, harder and of a straighter grain. American larch is similar to the European; the black variety (*Larix pendula*), known as hackmatack or tamarak, and the red variety (*Larix microcarpa*).

**LARDER.** A room or place where meat, etc., is kept before being cooked.

**LARDROSE.** A screen at the back of a seat behind an altar.

**LARMIER** or **CORONA.** Is the principal member in a cornice; it consists of a broad vertical face and a bold projection; it is often called a "drip" from its discharging rain-water in drops from its edge.

**LARRY.** A truck on a railway; a lorry.

**LARRY.** Thin mortar; a three-pronged rake or drag for mixing the hair in making hair mortar.

**LARRYING.** A method in brickwork of filling in the interior of very thick walls after the bricks which form the exterior face of a course are laid. A thick bed of soft mortar is spread between them and the bricks for the backing of the wall are individually pushed along in this bed until the mortar rises in the joints between them.

**LAST.** A load; a cargo; a certain weight or measure, generally estimated at 4,000 lb. but varying in different articles.

**LASTAGE.** A cargo; a load; ballast; stowage room for goods.

**LAT.** The simplest form of "tope"; a kind of pillar, constituting a marked feature of Buddhist architecture.

**LATCH.** A small piece of iron or wood to fasten a door; the catch by which a door is held fast.

**LATCHET.** A Scotch term for a "tingle" or "bale tack".

**LATENT HEAT.** Heat which enters into a body while changing its form from a solid to a liquid, or from a liquid to a vapour without altering its temperature; that which is insensible to the thermometer.

**LATER.** A brick or tile, among the ancients.

**LATERAL STRENGTH.** The resistance which a body will afford at right angles to its grain.

**LATERAL SURFACE.** Or convex of a pyramid, is all the triangles taken together.

**LATERAN.** One of the churches at Rome with a palace, etc., annexed to it; named from the owner of the ground in Nero's time.

**LATERITE.** A bright red mineral used as a brick.

**LATH.** A division of a county comprising several hundreds (the term survives only in Kent).

**LATH.** A thin narrow strip of wood nailed to the rafters of a building to support the tiles, or nailed to the studs to support the plaster; to cover or line with laths.

**LATH AND PLASTER.** Made of laths plastered over.

**LATH BRICKS.** Are twenty-two inches long and six inches broad; made in some parts of England.

**LATHE.** A machine for turning and polishing wood, ivory, metal, etc.

**LATHING HAMMER.** Used for nailing laths, etc.; has a hatchet edge at back, and usually a notch on one side for taking out nails.

**LATH RENDER, LATH SPLITTER.** One who splits wood up into laths; to cover or line with laths.

**LATHS.** Used in plastering ceilings, partitions, etc.; made in three thicknesses, classified as follows:—

Single laths,	$\frac{1}{4}$ to $\frac{3}{4}$ inch thick.
Lath and half-laths,	$\frac{1}{4}$ " "
Double laths,	$\frac{1}{2}$ " "

Sold in bundles generally containing three hundred and sixty lineal feet; they should be straight and free from large dead knots, splits or sap.

**LATHS.** The small angle irons sometimes used to support the slates in an iron roof; are generally known as "angle iron laths".

**LATHWOOD.** Is the wood (chiefly Baltic fir) used for splitting into laths, imported chiefly from Memel, and other Baltic ports, in half round logs.

**LATH-WORK.** A covering of laths for receiving plaster.

**LATIN CHURCH.** The Western or Roman Catholic Church.

**LATIN CROSS.** A cross in which the lower limb is longer than the other three, thus,  $\dagger$ .

**LATRINES.** Are a range of water-closets such as in schools, barracks, workhouses, etc.; they are generally so arranged as to be all flushed with one action.

**LATTEN.** A fine brass used for crosses, etc.; sheet brass or plates of mixed metal. The monumental brasses in churches are called "latten".

**LATTEN BRASS.** Plates of milled brass.

**LATTENS.** Sheets of iron under the thickness of No. 24 B.W.G.

**LATTICE.** Any network made by crossing laths, rods, or bars, called lattice work; a reticulated window, made of laths of wood, strips of iron or other material; only used where air rather than light is required, such as in cellars, etc.

**LATTICE GIRDER.** A girder braced with several sets of diagonal braces crossing each other.

**LATTICE WORK.** The arrangement of laths, etc., forming a "lattice".

**LAUNDER.** A wooden gutter or pipe.

**LAUNDRY.** A building for the washing and dressing of clothes; the place or room where clothes are washed, or the ironing room only.

**LAVA.** A term used vaguely of all molten matter flowing in streams from volcanic vents.

**LAVA MILLSTONES.** A hard basaltic stone obtained from quarries near Andernach on the Rhine.

**LAVATORY.** An apartment provided with basins, etc., for washing in; a cistern or trough to wash in; used formerly in monasteries.

**LAVER.** A brazen vessel containing water for the Jewish priests to wash in when they offered sacrifices.

**LAWN.** A space of ground covered with grass, generally in front of a house or mansion.

**LAY.** In the expression "lath, lay," etc., the term lay means to apply the pricking-up coat.

**LAY.** The direction in which the strands of a rope are twisted.

**LAYER.** In brickwork and masonry, is a term synonymous with "course".

**LAYER BOARD.** See Lear Board.

**LAY FIGURE.** A jointed figure in imitation of the human body.

**LAYING.** In plastering, is the first coat on laths; when a second coat is laid on it is called two coat work or "lath, lay and set"; when the work is floated it becomes three coat work, or "lath, lay, float and set"; for partitions and ceilings.

**LAYLAND.** Land lying untilled or in pasture.

**LAY STALL.** A place where milch cows are kept; a dung pit.

**LAZARETTO.** A public hospital for the reception of persons affected with infectious diseases.

**LAZULITE.** A mineral of a light, indigo blue colour, consisting of phosphoric acid, alumina and magnesia.

**LEAD.** A well-known metal of a dull bluish-grey colour; much used by the ancients for writing upon, now chiefly used for covering roofs, domes, flats, etc.; copper or composition nails must be used in fixing, as iron rusts away. It is not found in the metallic state, but is chiefly reduced from the ore called galena (the sulphide) by roasting or smelting in a reverberatory furnace which has long flues to catch the particles of lead which otherwise would be carried away in the smoke.

**LEAD.** The name given to main conductors or cables.

**LEAD CONCRETE.** Broken bricks immersed in lead.

**LEAD DOT, BUTTON or RIVET.** A small plug of lead in stone for the purpose of securing sheet lead. See Soldered Dot.

**LEADED STAIR TREADS.** Stone stair treads having lead dots, or covered with lead to prevent slipping, etc.

**LEADER.** A branch of ore, or rib or string of ore leading to the lode.

**LEAD FLAT.** A flat roof covered with lead.

**LEAD GLAZING.** A method of glazing articles made from terracotta, fireclay, etc., by dipping them into a bath containing oxide of lead and tin, or borax with kelp, sand, etc., ground to a powder and mixed with water to a creamy consistence; the articles are afterwards reburnt.

**LEAD GLAZING.** A method of glazing windows, etc., with lead as the fixing material of the glass, which is generally in small pieces held together by lead "comes" (which see).

**LEAD HEADED NAILS.** Are iron nails having their heads dipped into molten lead in order to protect them from the atmosphere; used in fixing lead.

**LEAD LIGHTS.** Windows, etc., glazed after the manner of the above.

**LEAD PENCIL.** A marking and drawing instrument made by enclosing a slip of graphite (commonly called plumbago or black-lead) in a casing of wood.

**LEAD PLUGS.** Used for connecting stones, is a dovetailed or other shaped hole, made one in each stone exactly opposite each other, with a channel leading to them from the top of the joint, through which molten lead is run into them.

**LEAD POISONED WATER.** Water in which lead is dissolved.

**LEADS.** A lead flat.

**LEAD SAFE.** A lead tray fixed under a water-closet or bath to catch any leakage.

**LEAD SOAKERS.** See Soakers.

**LEAD SPAR.** Sulphate of lead.

**LEAD TACKS.** Are strips of lead about six inches by two inches, sometimes more, fixed at intervals to hold down the edge of exposed sheet lead on roofs.

**LEAF.** The side of a window shutter, folding door, etc.; the movable side of a table; an upright slab of stone, etc.

**LEAF.** A term sometimes applied to metal when beaten out into very thin sheets.

**LEAF BRIDGE.** A drawbridge, as having a platform on each side which rises and falls.

**LEAF METAL.** A metallic leafy preparation for giving a cheap and brilliant surface to metal and other substances.

**LEAFWOOD.** The timber of trees which bear leaves; also called "hardwood".

**LEAGUE.** A measure of length varying in different countries; the English land league is three, and the nautical league nearly three and a half statute miles.

**LEAN.** To deviate from a straight or perpendicular line; to incline or bend.

**LEAN TO.** A building leaning on another.

**LEAN TO ROOF, SHED ROOF or PENTHOUSE.** A shed or building annexed to the wall of a larger one, the roof being formed of a single slope or inclination (lean to) with the top resting against the wall of the principal building.

**LEANING PLACE OF A WINDOW.** The thin wall frequently placed below the sill of a window on the inside.

**LEAR BOARD.** Is that upon which the lead work of a gutter is laid to prevent it sinking between the rafters. The board is fastened on the feet of the rafters under the bottom rows of the slating or tiling.

**LEASE.** The letting of tenements for a term of years; the contract for such letting.

**LEAT.** A water-course to or from a mill; a level for the conveyance of water.

**LEAVES.** Ornaments imitated from natural leaves; the ancients used two sorts, the natural and the imaginary; the flaps to a table, folding shutters, or folding doors.

**LECTERN or LETTERN.** A stand with a desk for the book from which the service is read in a church. The desk is sometimes in the form of an eagle or pelican with the wings expanded to receive the book, or it is made with two flat sloping sides or desks for books. In Scotland it is called the "precentor's desk". Lecterns are made of stone, marble, wood and brass.

**LEDGE.** A piece of wood nailed or screwed across several boards to hold them together; a small moulding; a part rising or projecting beyond the rest; a ridge; a layer.

**LEDGED and BRACED DOOR.** A door made of several vertical boards and horizontal ledges as in a ledged door, but having diagonal braces running from the corners of the ledges, thus, Z.

**LEDGED DOOR.** A door consisting of vertical boards, called battens, and secured by horizontal pieces, called ledges or backs.

**LEDGEMENT.** A strong course or horizontal moulding.

**LEDGEMENT or DEVELOPMENT.** The development of a surface, or the surface of a curved body stretched out on a plane, thus allowing the dimensions to be easily ascertained.

**LEDGEMENT TABLE.** Any of the projections of a plinth in Gothic architecture, except the lowest or "earth table"; a string course or horizontal suite of mouldings.

**LEDGER.** In scaffolding, is the horizontal poles lashed to the standards; a piece of timber to support the platform of scaffolding; a horizontal covering slab.

**LEDGER.** The principal book of accounts among merchants, etc., into which the items of the other accounts are entered on debtor and creditor sides in a summary form.

**LEE MOOR FIREBRICKS.** Are made from the refuse of china clay which is produced by the disintegration of felspathic granite.

**LEG.** The long or slender support of anything.

**LEGS OF A HYPERBOLA.** The two parts on each side of the vertex.

**LEGS OF A TRIANGLE.** The sides which enclose the base.

**LEICESTERSHIRE GRANITE.** Is hard, tough and difficult to dress; is not much used for building, being better adapted for paving and road material.

**LEMMA.** An auxiliary proposition demonstrated on account of its immediate application to some other proposition.

**LEMNIAN EARTH.** A clay found in the Isle of Lemnos.

**LEMNISCATA.** The name of a curve in the form of the figure 8.

**LEMNISCATA, LEMNISCATE.** A curve in the form of the figure 8,  $\infty$ .

**LEMON CHROME.** A pale variety of chrome yellow.

**LENGTH.** Measure or extent from end to end, as distinguished from breadth or thickness.

**LENS.** A piece of transparent substance, usually glass, so shaped as to change the direction of rays of light and diminish or increase the apparent size of objects viewed through it.

**LENZITE.** A hydrated silicate of alumina.

**LETTERWOOD.** A beautiful wood of Guiana used for cabinet work and veneering.

**LEVECEL.** Anciently, a penthouse, or a projecting roof over a window, door, etc.

**LEEVE.** An embankment on a river; to embank.

**LEVEL.** In mining, a horizontal gallery or passage.

**LEVEL.** An instrument by which to find the horizontal, or for determining the heights of one place with respect to another; a line or surface which inclines to neither side.

**LEVEL EASING.** In handrailing, is a rail curved in a horizontal plane; if it is a quarter circle it is called a "level quarter".

**LEVEL LANDINGS.** In staircasing, are those in which the stairs terminate on a level floor.

**LEVELLING.** The finding of a line

parallel to the horizon, at one or more stations or points, in order to determine the height of one place with respect to another, for laying out ground even, etc.

**LEVER.** A bar of metal, wood or other substance turning on a support called the fulcrum or prop, called its centre of motion and contrived originally to raise heavy weights.

**LEVERAGE.** The mechanical advantage gained by the use of the lever.

**LEVER BOARDS.** A set of boards, generally vertical, fastened so that they can be turned to any angle to admit more or less light, air, etc.

**LEVER LOCKS.** Are those having one or more levers, latches or tumblers which require to be raised so as to allow of the free motion of the bolt.

**LEVESELL.** Formerly, a lattice, a lattice window; a penthouse; an open shed.

**LEWIS.** An appliance for raising large stones, thin wedges of iron being indented into the stone, so as to form a dovetail.

**LEWIS BOLT.** A bolt enlarged at one end for letting into stone.

**LEWS.** Temporary roofs to protect raw bricks when on the hacks.

**LEYDEN JAR.** A glass jar used to accumulate electricity, invented at Leyden.

**LI.** A Chinese measure of length, about half an inch.

**LIAS.** An argillaceous limestone which forms the basis of the oolitic formation.

**LIAS OR STONE LIME.** Is of a pale grey colour; it slakes very sluggishly; it is an eminently hydraulic lime, and is obtained from the lias beds in the midland and south-western counties, and contains about 80 per cent. of calcium carbonate, 17 per cent. silica and alumina.

**LIAS CEMENT.** Is that produced from lias shales that contain a large proportion of soluble silica.

**LIBETHENITE.** Phosphate of copper; first observed at Libethen, Hungary.

**LIBRARIAN.** The keeper of a library.

**LIBRARY.** An apartment or edifice containing a collection of books.

**LIBRATION.** The act of balancing ; the state of being balanced.

**LICH GATE, LYCH or CORPSE GATE.** A porch or gate to a churchyard having a roof over it, beneath which the bearers pause and deposit the bier while a part of the service is being read.

**LID.** A cover, as of a box, etc.

**LIDDED PIPE or OPERCULAR PIPE.** A drain pipe made so that the upper portion may be taken off.

**LIEN.** A right to detain the goods of another until some claim has been satisfied.

**LIERNE RIB.** In vaulting, is a cross rib that does not rise from the impost and is not a ridge rib.

**LIFT.** A contrivance to convey goods or persons from the lower to the higher floors of a building, worked either by manual or hydraulic power. Hydraulic lifts may be "direct acting" and have the cage supported by a direct ram working in a cylinder sunk in a well a few feet deeper than the travel of the lift, or they may be "suspended" and have the cage suspended by means of ropes or chains.

**LIFT.** A ring or handle for lifting a sliding shutter or sash ; in the former case it is generally flush with the wood.

**LIFT.** To "lift" a road is to loosen and turn over the top layer to a depth of four or five inches, removing all inferior, rotten or large material.

**LIFTING BRIDGE.** A drawbridge which lifts.

**LIFTING GEAR.** The apparatus for lifting the safety valves from within a boiler ; it consists of levers connected to the valve and to a screw worked by a handle outside the boiler.

**LIFTING JACK.** See Screw Jack.

**LIFTING PUMP.** A pump having the barrel closed at the top and capable of forcing water through a pipe to a great height.

**LIFTING SHUTTER.** A detached shutter, or a vertically sliding shutter.

**LIFT LOCK.** A canal lock.

**LIGHT CAPPAGH BROWN or EUCHROME.** Consists of bog earth and manganese.

**LIGHTHOUSE.** A tower or building with a light at the top to direct seamen at night.

**LIGHTNING ROD or CONDUCTOR.** Is generally in the form of a solid copper roll fixed to the highest part of a chimney, building, spire, tower, etc., and carried down the face of it and into the earth ; they determine the course of the lightning but do not attract it ; a wired rope should never be used.

**LIGHTS.** The openings between the mullions of a window, screen, etc. Sashes are sometimes called "lights," and in the north of England "sheets" ; any opening in a wall or roof made for admitting light.

**LIGNEOUS.** Made or consisting of wood ; resembling wood.

**LIGNITE.** Wood coal ; fossil wood, generally of tertiary age, converted into a kind of coal.

**LIGNUM VITÆ (*Guaiacum officinale*).** An exceedingly hard, heavy, dark coloured, close grained wood, generally covered with a smooth yellow sap-like box ; when first cut it is soft and easily worked, but speedily becomes much harder upon exposure to the air ; imported from the West Indies and South America ; used for pulleys, wheels, turnery, etc.

**LIKE ARCS.** In the projection of a sphere, the parts of lesser circles containing an equal number of degrees with the corresponding arcs of greater circles.

**LIKE FIGURES.** In geometry, such as have their angles equal and the sides about the equal angles proportional.

**LIKE SOLIDS.** Those which are contained under the like or same planes.

**LIMAN.** Mud at the mouth of a river.

**LIMATION.** The act of filing or polishing.

**LIME OR CALCAREOUS EARTH.** Is obtained from limestone by burning in a kiln; it is never found pure in nature; it exists only in combination with other substances, which are principally carbonic acid, clay, iron and magnesia; the residuum left after burning is called quicklime.

**LIME ASH FLOORS.** Are made in various ways, according to the district; one of the best methods is to use sand, well washed and freed from earth, and mixed with lime ashes in the proportion of two-thirds sand to one-third lime ashes and well mixed together and left for two or three days, then laid as required.

**LIME BURNER.** One who burns limestone to obtain the lime.

**LIME KILN.** A furnace in which limestone is exposed to a strong heat and reduced to lime.

**LIME KNOTTING.** Consists of hot lime being applied to the knots which after being left on for twenty-four hours is scraped off and size knotting applied.

**LIME LIGHT.** A light caused by making a stream of two gases, oxygen and hydrogen, play in a state of ignition on a piece of lime.

**LIME SHELLS.** In Scotland, quicklime in lumps.

**LIME SINK.** A rounded hole or depression in the ground in limestone districts.

**LIMESTONE.** Is a term applied to any stone composed chiefly, or largely, of carbonate of lime.

**LIME TREE.** Is common in Europe, attains considerable size, very light coloured, fine and close in the grain; particularly suitable for carving from its even texture and freedom from knots.

**LIME WATER.** A solution of lime in 700 parts of cold water.

**LIMITED LIABILITY.** A term used chiefly of joint stock companies, in which the liability of the shareholders is limited to the amount of their shares.

**LIMIT OF ELASTICITY.** When a metal or piece of timber is subjected to a small strain (tension, compression or distortion) it returns to its

original form when the strain is removed, but if the strain be gradually increased a point will be reached beyond which it will not retain its original form on the removal of the strain, it remains bent or a permanent set is produced; this point is called the "limit of elasticity".

**LIMN.** To paint, especially in water-colours.

**LIMNER ASPHALT.** Is found at Limner, near Hanover; it is broken up and mixed with clean grit together with a small proportion of bitumen, and melted in caldrons, and laid in two thicknesses, the lower layer having a coarser grit in it than the other.

**LIMNING.** Water-colour painting.

**LIMONITE.** A hydrated sesquioxide of iron.

**LINCH.** Formerly, a ledge; a rectangular projection.

**LINCH PIN.** A pin to fasten a wheel on an axle.

**LINCRUSTA WALTON.** Consists of a mixture of boiled linseed oil with driers and fibre rolled on to a textile material and pressed by machinery forming designs in relief; made in five colours, red, drab, green, brown and buff; it can of course be decorated to any colour required; made in lengths like wall-paper; very durable, washable, and a non-conductor of heat.

**LINE.** In geometry, is a magnitude having only one dimension—length; a "right line" is the shortest straight line that can be drawn between two points; a trench or rampart.

**LINEAL.** Length; running measure; composed of lines; pertaining to or measured by a line.

**LINEAL FEET.** Means running feet or feet run in length.

**LINEAR PERSPECTIVE.** That which regards only the positions, magnitudes, and forms of objects, and expresses their diminution in proportion to their distance from the eye.

**LINE OF DIRECTION.** In mechanics, the line in which motion is communicated.

**LINE OF NOSINGS.** In staircasing, applying a straight edge on a series of nosings, or the rounded edges of the treads, or a line tangent to the nosings, thus parallel to the pitch of stairs.

**LINE OF RUPTURE.** In the case of a slip of earth, is that along which separation takes place.

**LINE OF STATION.** The intersection of a plane passing through the eye, perpendicular to the drawing, and to the geometrical or primary plane with the plane itself.

**LINE OF LIGHT AND SHADE.** Those in which the light and shade of a body are separated.

**LINING.** A general term in joinery, applied to internal door casings, the casings on sash frames, etc.

**LINING OF A WALL.** Or wall lining, is a timber boarding, such as match boarding, fixed on the surface of a wall; also applied to nearly all coverings of wood placed so as to conceal or ornament portions of the interior of a building.

**LINING OUT STUFF.** The drawing of lines on a piece of board or plank, so as to cut it into smaller dimensions.

**LINING PAPER.** Common white paper placed under a wallpaper of a better class, in order to protect same against damp and stains, and to obtain a smoother surface to work upon.

**LININGS OF A DOOR.** See Door Linings.

**LININGS OF BOXINGS.** For window shutters, are the pieces of frame work into which the window shutters are folded back.

**LINK.** A measure of 7·92 inches; a ring of a chain; a bend in a river.

**LINK MOTION.** Gear by which the valve is operated in locomotives and similar engines.

**LINOLEUM.** A composition into which linseed oil enters; floor-cloth made of it.

**LINSEED OIL.** Is produced by compressing flax seed. The best oil is obtained from the Black Sea and the Baltic; that obtained from the East Indian seed is an inferior oil.

**LINSTOCK.** A stick to hold a lighted match, or taper, for lighting gas in churches, etc.

**LINTEL.** A horizontal piece of timber or stone placed over a window, doorway or other opening through a wall to support the overhead weight.

**LIONCELLE.** In heraldry, a small lion, especially one of several borne in the same coat of arms.

**LIP JOINT.** A joint used in terracotta with flange on one piece fitting into rebate in the adjacent one.

**LIPPED** (also see Buttered). A term applied when only a small quantity of mortar or cement is inserted in the front of the joint in a brick or stone wall, when the joints are said to be "lipped".

**LIPPED.** Deal shelves having a strip of mahogany or other wood glued on their front edge, when they are said to be "lipped," the strip glued on being called the "lipping".

**LIP PIECE.** A short piece of timber spiked on and covering a joint between strut and walling.

**LIQUEFACIENT.** That which liquefies.

**LIQUEFACTION.** The state of being melted; the act of dissolving, or the operation of liquefying.

**LIST.** A thin coating of white iron round the exterior edges of a fracture in inferior pig iron.

**LIST.** A little square moulding; a fillet; a catalogue of goods.

**LIST PRICE.** The price of an article in a manufacturer's or merchant's list or catalogue.

**LISTED BOARDS.** Those having the sap removed from their edges.

**LISTEL.** A list or fillet.

**LISTING.** The act of cutting the sap-wood out from the edges of a board; the cutting.

**LITHANTHRAX.** Stone coal.

**LITHARGE.** The semi-vitrified protoxide of lead. See Massicot.

**LITHOCHROMATICS.** The art of painting in oil upon stone and taking impressions on canvas.

**LITHOFRACTEUR.** A kind of nitro-glycerine used for blasting.

**LITHOGRAPH.** To engrave or draw on stone and transfer on paper, etc., by printing; an impression from a drawing on stone.

**LITHOGRAPHER.** One who practises lithography.

**LITHOGRAPHIC LIMESTONE.** A sedimentary limestone from the upper beds of the jurassic formation.

**LITHOGRAPHIC STONE.** A slab of lithographic limestone prepared for the lithographer.

**LITHOGRAPHY.** The art of tracing designs on stone and printing them on paper.

**LITHOIDAL.** Like stone; having a stone structure.

**LITHOLOGY.** The science of the constitution and structure of rocks.

**LITHOMARGE.** A compact clay of a fine smooth texture.

**LITHOPHANE.** A style of ornamental porcelain adapted to lamps and other transparencies.

**LITHOPHOTOGRAPHY.** The producing of lithographs from photographs developed on the stone.

**LITHOTINT.** A process of drawing upon stone with a camel's-hair pencil; a drawing so produced.

**LITHOXYLE.** Petrified wood.

**LITIGANT.** Engaged in litigation; one engaged in a law suit.

**LITIGATE.** To contest in a court of law.

**LITIGATION.** The act or process of litigating; judicial contest.

**LITRAMETER.** An instrument for ascertaining the specific gravity of liquids.

**LITRE.** A French measure of capacity equal to nearly  $1\frac{1}{2}$  pints.

**LITTORAL.** Belonging to a shore, sea or great lake.

**LIVE KNOTS.** In timber, are due to the presence of a living branch when the tree was cut down; they form apparently part of the board, etc., in which they occur.

**LIVE LOAD.** Is that which is suddenly applied or is accompanied by shocks or vibration, *e.g.*, a gust of wind upon a wall or roof.

**LIVE OAK** (*Quercus virens*). Is of a dark brown or yellow colour, fine in grain, minute pores, distinct

medullary rays; the logs are crooked, but strong and durable.

**LIVER ROCK.** In quarrying, is the best and most homogeneous stone which comes out in large blocks undivided by intersecting vertical and horizontal joints.

**LIVERY STABLE.** A stable where horses are kept at livery or for hire.

**LIVE WIRE.** See Dead Wire.

**LIVING ROCK.** Rock in its native state or location.

**LIVING ROOM.** A family sitting-room; a dining-room.

**LIXIVIUM.** Water impregnated with alkaline salts from wood ashes.

**LIZARD STONE.** The serpentine marble stone found in Cornwall, near the Lizard Point.

**LOAD.** The work done by an engine working up to its capacity; in mining, nine dishes of ore, each dish being about half a cwt.

**LOAD.** Is the combination of external forces acting upon any structure. See Dead Load and Live Load.

**LOAD of sand, earth, or rubbish** = one cubic yard.

**LOAD of square or hewn timber deals, etc.** = fifty cubic feet.

**LOAD of unhewn timber** = forty cubic feet.

**LOAD of bricks** = 500 bricks.

„ „ tiles = 100 tiles.

„ „ mortar = twenty-seven cubic feet.

**LOAD of straw** = 1,296 lb.

„ „ new hay = thirty-six trusses weighing sixty pounds each.

**LOAD of old hay** = thirty-six trusses weighing fifty-six pounds each.

**LOADSTONE.** An iron ore which has the power of attracting iron.

**LOAM.** A natural mixture of clay, sand and lime; it is called "light" or "heavy" according to the clay being more or less abundant; used sometimes for casting, in which case no pattern is required.

**LOAMS, MILD CLAYS or SANDY CLAYS.** Are those consisting of clay and sand.

**LOBBY.** A passage opening into several apartments; a hall serving as an anteroom; a small hall or

waiting-room; a confined place for cattle near a farmyard.

**LOCATE.** To select, survey and settle the bounds of a particular tract of land.

**LOCH.** A lake; an arm of the sea.

**LOCK.** An instrument to fasten doors, drawers, etc.; locks for doors or drawers are described according to their length, whilst cupboard locks are described according to their height.

**LOCK.** An enclosure in a canal with gates at each end for raising or lowering boats.

**LOCKAGE.** Works which form a canal lock; amount of ascent and descent of the locks; toll paid for passing the locks.

**LOCK CHAMBER.** The basin of a canal lock.

**LOCKER.** A place that may be closed with a lock; a drawer; a cupboard; a large chest provided on large jobs for the men to lock up their tools at night.

**LOCKET.** A small lock.

**LOCK GATE.** The gate of a lock chamber.

**LOCK KEEPER.** One who attends the locks of a canal.

**LOCK OUT.** The exclusion of workmen from a manufactory or works, by the masters, to bring the workmen to terms.

**LOCK PADDLE.** A small sluice that serves to fill and empty a lock.

**LOCK RAIL.** The rail of a door on which the lock is fixed; called a "belt rail" in Scotland.

**LOCKRAND.** A course of bond stones, or a bonding course in masonry.

**LOCK SILL.** An angular piece of timber at the bottom of a lock, against which the gates shut.

**LOCK SMITH.** One who makes locks.

**LOCK WEIR.** A weir having a lock.

**LOCOMOTIVE.** A railway engine; a locomotive machine.

**LOCUS.** In geometry, the line generated by a point, or the surface generated by a line moving according to a fixed law.

**LOCUTORY.** An apartment in a monastery in which the monks were allowed to converse when silence was enforced elsewhere.

**LODE.** In mining, a metallic vein or any regular vein or course; a reach of water.

**LODGE.** A small house or cottage situated in a park or placed at the gate of a road leading to a mansion.

**LODGING HOUSE.** A house let out by the tenant in separate apartments.

**LODGMET.** An intrenchment to maintain the position in a captured work.

**LOESS.** An alluvial tertiary deposit of calcareous loam.

**LOFT.** A room or space immediately under the roof; a gallery in a church or large hall; a store-room in a theatre; a music loft; a rood-loft in a church.

**LOFTY TIN.** Rich, massive and rough tin.

**LOG or STICK.** Is the name given to the trunk of a tree when the branches are lopped off.

**LOG.** A Hebrew liquid measure variously reckoned at three-fourths or five-eighths of a pint.

**LOGARITHMIC or LOGISTIC SPIRAL, or PROPORTIONAL SPIRAL.** Is one in which the ordinates form equal angles at the centre and all the succeeding ordinates and chords form equal angles at the curves.

**LOGARITHMS.** Artificial numbers used to facilitate arithmetical calculations.

**LOG CABIN, HOUSE or HUT.** A cabin, house or hut built of logs.

**LOGEUM.** The pulpitum or wooden stage of a theatre, placed upon the proscenium or permanent stage. In the Greek theatre the pulpitum extended into the orchestra beyond the proscenium.

**LOGGERHEAD.** A spherical mass of iron with a long handle; used to melt tar.

**LOGGIA.** A lodge; a gallery open to the air; a gallery or corridor in front of a palatial building, open to the air on one or more sides.

**LOGGING.** The business of felling trees and preparing the timber for transport.

**LOG HEAP.** A pile of logs for burning in clearing land.

**LOG HOUSE.** A hut constructed from trunks of trees.

**LOGISTIC ARITHMETIC.** A system of arithmetic in which the logarithms of sexagesimal numbers (called logistic logarithms) are employed.

**LOGISTICS.** Sexagesimal arithmetic.

**LOGIUM.** A hovel or outhouse.

**LOGMAN.** A man who carries logs; or one whose occupation is to cut and convey away logs.

**LOGS.** The cubic contents of logs are marked on them thus:—

		= 63 cubic feet.
		= 21 " "
		= 26 " "
		= 26 " "
		= 16 " "

**LOGWOOD.** A wood of a deep red colour, extensively used as a dye, obtained from Honduras, Jamaica, etc.

**LOMBARDIC ARCHITECTURE.** A style which immediately succeeded the decline of the Roman style.

**LONDON CLAY.** A tertiary formation developed under and around the city of London.

**LONDON STANDARD OF TIMBER.** Contains 270 cubic feet.

**LONG AND SHORT WORK.** In masonry, consists of the quoins being placed alternately upright and flat; done in the eleventh century.

**LONG DOZEN.** Thirteen.

**LONG HUNDRED.** One hundred and twenty.

**LONG HUNDRED OF DEALS** = six score.

**LONG HUNDREDWEIGHT** = 120 pounds.

**LONGIMETRY.** A term signifying the operation of trigonometry, for measuring lengths whether accessible or inaccessible.

**LONG MEASURE.** Lineal measure.

**LONG SCREW.** See Connecting Piece.

**LOOKUM.** The projection on the upper floor of a warehouse or mill to cover a wheel and fall or a crane.

**LOOP.** A small narrow window.

**LOOP.** Part of a block of cast iron melted or broken off for the forge or hammer.

**LOOP.** The hinge of a door.

**LOOP.** A rail of bars joined together like a gate, to be removed in and out at pleasure.

**LOOP HOLE.** A narrow opening or crenelle used in the embattlements of the castles of the early English.

**LOOP HOLES.** The vertical series of doors in a warehouse from which the goods are taken in or out of the building by means of a crane, etc.

**LOOP LINE.** A short railway line running alongside of, out of, and returning to the main line.

**LORICATION.** The filling of walls with mortar.

**LORRAINE OR PATRIARCHAL CROSS.** Is a cross having two arms, one longer than the other, thus,  $\neq$ .

**LOTUS.** A plant of the water-lily species frequently used in the architectural ornaments of the ancients.

**LORRY.** A long four-wheeled waggon without sides.

**LOT.** A parcel or plot of land; a piece or parcel of goods at an auction.

**LOUNGE.** An apartment in theatres, etc., provided for smoking, etc.

**LOUVRE.** A small turret or lantern placed on roofs of stables, etc., for ventilation.

**LOUVRE OR LUFFER BOARDS.** Are the sloping boards in unglazed windows—as in louvre windows—to keep out the weather, etc., frequently used in lower windows to exclude rain but to allow the passage or sound from the bells.

**LOUVRE WINDOW.** A window with louvre boards; used in church steeples, stables, warehouses, etc.

**LOW PRESSURE.** Said of steam as exerting, and of steam engines as employing, a pressure on the piston

of under two atmospheres, or fifty pounds to the square inch.

**LOW SIDE WINDOW.** A small opening like a window, usually placed in the south chancel wall, and lower down than the other windows.

**LOXODROMIC CURVE.** A line which always makes an equal angle with every meridian.

**LOY.** A long narrow spade.

**LOZENGE.** A quadrilateral figure of four equal sides, with oblique angles.

**LOZENGE.** In heraldry, a four-cornered figure resembling a pane of glass in old casements.

**LOZENGE MOULDING.** A moulding ornamented with a series of lozenges; used in Norman architecture.

**LOZENGE SHAPED.** Diamond shaped; rhomboidal.

**LOZENGY, LOZENGE.** In heraldry, divided lozenge-wise.

**LUBRICATE.** To make smooth or slippery.

**LUBRICATOR.** An oil cup or other contrivance for supplying oil or grease to rubbing surfaces, as bearings, etc., in order to diminish friction.

**LUCARNE.** A spire light; a small window like a slender dormer window.

**LUCERNA.** The oil lamp of the ancients.

**LUCULLITE.** A variety of black marble as introduced into Rome by Lucullus.

**LUFFER.** The turret on a hall or kitchen roof, the wooden window in a church steeple.

**LUG.** A small projection on a casting, generally with a hole in it for a bolt.

**LUM.** Scotch for chimney.

**LUMBER.** An American term for squared timber of large size; timber sawn or split for use; to cut timber for the market.

**LUMBER DEALER.** A timber merchant.

**LUMBERER.** In America, one

engaged in cutting and getting lumber from the forest.

**LUMBER ROOM.** A room for the reception of lumber or useless things; a box room.

**LUMINOUS PAINTS.** Consist of sulphide of calcium made up with varnish, applied to only clean surfaces free from oil, lead, paint or corrosion.

**LUMPS.** See Fire Lumps.

**LUNATIC ASYLUM.** A house or hospital for lunatics.

**LUNE or LUNULA.** The space between two equal arcs of a circle; anything in the shape of a half moon.

**LUNETTE.** In fortifications, an advanced work composed of two faces and two flanks.

**LUNETTE.** A spherical, cylindroidic or cylindric aperture in a vault or arched ceiling for the admission of light.

**LUSTRE.** A chandelier ornamented with cut glass.

**LUTE.** A composition of clay or other tenacious substance for making vessels air-tight, or for coating and protecting them when exposed to the fire.

**LUTEOUS.** Anything of a brownish-yellow or clay colour.

**LUTHERN.** A dormer window.

**LYCEUM.** The gymnasium in which Aristotle taught; a place devoted to instruction and lectures; a school for higher education.

**LYCH GATE.** See Lich Gate.

**LYCHNUS.** A lamp suspended, or a pendent light.

**LYING LIGHT.** A ceiling or skylight.

**LYING PANEL.** A wood panel with the fibres of the wood disposed horizontally.

**LYON COURT.** In heraldry, the Scottish court of the lyon-king-at-arms.

**LYON KING AT (or OF) ARMS.** The chief of the Scottish heralds.

**LYSIS.** A plinth or step above the cornice of the podium of ancient temples; it surrounded or embraced the stylobate.

## M.

**M.** As a numeral, **M** stands for one thousand, and with a dash over it for one million. Slates are sold by the **M** of 1,200 or "long thousand".

**M ROOF.** Consists of two ordinary triangular roofs side by side, thus, **M**.

**MACADAM.** Stone broken to a uniform gauge for covering a road-way.

**MACADAMISE.** To cover a road with small broken stones.

**MACADAMISED ROAD.** A road covered with small broken stones which form a smooth, hard surface; so called from the projector's name.

**MACE.** An ornamented staff used as a sign of authority.

**MACELLUM.** A market place for all kinds of provisions.

**MACERIA.** A rough wall.

**MACHICOLATED.** Having overhanging battlements or machicolations.

**MACHICOLATIONS.** Openings beneath parapets or in the top of a castle or fortified building, through which stones, pitch or offensive missiles were dropped on the heads of assailants.

**MACHICOULIS.** A projecting parapet or balcony with holes for firing through.

**MACHINE.** Any contrivance consisting of a combination of the mechanical powers. Machines are either simple or compound. The former is composed of the six simple mechanical powers, *viz.*, the lever, the wheel and axle, the pulley, the wedge, the screw and the funicular machine. A compound machine consists of a combination of two or more simple machines.

**MACHINED.** A term applied to any part of a casting which has been turned in the lathe.

**MACHINE WROUGHT.** A term applied to timber or stuff when it is fixed as left from the machine, such as floor boards, skirting, etc.

**MACHINE WROUGHT NAILS.** Those made from wrought iron pressed while red hot into shape by grooved

rollers, cut up, and the heads formed by means of a die; they are not so strong or elastic, and have not such clean sharp angles as the hand wrought nails.

**MACHINIST.** One who works or tends a machine.

**MACLE.** A mineral occurring in tapering crystals in clay slate.

**MACRO-CRYSTALLINE.** Having crystals visible to the naked eye.

**MACRODIAGONAL.** The longer diagonal of a rhombic prism.

**MACROMETER.** An instrument to measure inaccessible objects by means of two reflectors on a common sextant.

**MADDER BROWN or RUSSET RUBI-ATES.** Are vegetable colours.

**MADDER CARMINES.** Are vegetable colours, little if at all affected by lime; suitable for distemper painting.

**MADDER ORANGE or ORANGE LAKE.** Is a madder lake of an orange hue, varying from yellow to rose-colour and brown.

**MADDER PURPLE.** Is a very rich and deep carmine prepared from madder. Though not a brilliant purple, its richness, durability, transparency, and superiority of colour, has given it the preference to the purple of gold purple, and to burnt carmine. Also known as "purple rubiate" or "Field's purple".

**MADDER YELLOW.** Is a preparation from the madder root. The best is of a bright colour resembling Indian yellow though hardly equal to it in durability of hue.

**MADREFEEL.** Mother-of-pearl.

**MADREPORE MARBLE.** That composed entirely of fossil corals.

**MADRIER.** A thick iron-plated plank used in military works and mines.

**MENIANA.** Seats in the upper porticoes of the Roman forum.

**MAGAZINE.** A building or apartment for military stores; a warehouse.

**MAGENTA.** An aniline red dye; named from a city of Italy near

which the Austrians were defeated by the French and Sardinians in 1859.

**MAGILP.** A compound of linseed oil and mastic varnish; used by artists as a vehicle of colours.

**MAGNESIA.** Oxide of magnesium, a white alkaline antacid earth.

**MAGNESIUM.** The metallic base of magnesia.

**MAGNESIUM LIGHT.** A brilliant light produced by burning metallic magnesium; used in photography.

**MAGNET.** The loadstone; a steel bar to which the properties of the loadstone have been imparted.

**MAGNET.** In practice, a mass of iron or steel which has the power of attraction for the para-magnetic bodies (iron, steel, etc.) and also of inducing electric currents into conductors moving in its vicinity. A permanent magnet is of steel; a temporary magnet consists of iron more or less soft, wound round with coils of insulated wire through which an electric current flows. A temporary magnet of this kind is called an electro-magnet. The magnet of a dynamo is usually termed field magnet. The parts of a magnet of the simple horse-shoe type are termed poles, limbs, yoke and armature.

**MAGNETIC.** Any metal, as iron, nickel, cobalt, etc., which may receive the properties of the loadstone.

**MAGNETIC BATTERY.** A combination of magnets with their poles similarly disposed.

**MAGNETIC BLOW-OUT.** A device lately come into practice by which the destructive arc or spark which occurs at the breaking of a circuit (on the action of a switch or cut out) is extinguished. The spark is made to take place in the field of a simple electro-magnet, which is actuated by the same current controlled by the switch or fuse. Regulators used very frequently and fuses, both carrying large currents, should be provided with magnetic blow outs.

**MAGNETIC FIELD.** The space affected by a magnet.

**MAGNETIC FLUID.** A fluid supposed to account for magnetism.

**MAGNETIC INDUCTION.** The effect produced by a magnet upon magnetic bodies near it.

**MAGNETIC IRON ORE.** Is obtained chiefly in Sweden and Norway, a small quantity being found in Devonshire.

**MAGNETIC MERIDIAN.** The direction indicated by a freely suspended magnetic needle.

**MAGNETIC NEEDLE.** A slender poised bar of magnetised steel.

**MAGNETIC POLES.** Two nearly opposite points of the earth's surface where the magnetic needle dips vertically.

**MAGNETISM.** That branch of science which treats of the properties of the magnet and magnetic phenomena.

**MAGNETITE.** A magnetic ore of iron.

**MAGNETO-ELECTRIC.** Pertaining to magneto-electricity.

**MAGNETO-ELECTRICITY.** Electricity evolved by magnets; the science which treats of electricity thus evolved.

**MAGNETOGRAPH.** An instrument for registering magnetic states.

**MAGNETOMETER.** An instrument to ascertain the force of magnetism.

**MAGNETOMOTOR.** A voltaic series of two or more large plates, producing a great quantity of electricity of low tension.

**MAHOGANY** (*Swietenia mahagoni*). Is known according to the appearance of the vein formations or the characteristics of the grain, as plain, figured, veiny, watered, mottled, bird's-eye, festooned and velvet cowl. The term figured is the one most generally used. Mexican mahogany shows the characteristics of Honduras mahogany, but is coarse in quality, spongy in the centre and liable to starshakes; some varieties of it are figured; it is imported in balks fifteen to thirty inches square, and eighteen to thirty feet in length. Spanish mahogany is richer, darker, heavier, harder and more figured in the grain than Honduras; it is found in the West Indies, but that which

comes from the island of Cuba is considered best, and can be always known by the white chalk-like substance found in the pores.

**MAHOGANY STAIN.** Consists of burnt sienna ground in vinegar, grained and shaded while wet with the same, thickened with more sienna.

**MAIN.** A main pipe, as a gas or water main.

**MAIN or MAIN DRAIN.** A "main" drain is the principal drain into which the branch drains discharge.

**MAIN SPRING.** The outlet of a body of water which has been imprisoned between two impervious strata.

**MAJOLICA.** A kind of enamelled pottery introduced into Italy from Majorca.

**MAJOLICA TILES.** Are those having their colour applied in the form of an enamel or coloured opaque glaze.

**MAJOR AXIS.** Or the transverse axis, is the longest diameter of an ellipse.

**MAKE GOOD.** To make compensation for; to repair any damage done during the carrying out of a contract.

**MAKE UP.** To level up.

**MALACHITE.** Native carbonate of copper, of a green colour.

**MALACOLITE.** A variety of augite.

**MALE.** Said of a screw whose threads enter the grooves or corresponding threads in a nut, which is termed the "female".

**MALL.** A large heavy wooden beetle or hammer; to beat with a mall.

**MALL.** A public walk; a level shaded walk.

**MALLEABILITY.** The property of being permanently extensible in all directions by hammering and rolling.

**MALLEABLE.** That which may be extended by beating.

**MALLEABLE CASTINGS.** Are those which have been annealed and converted, more or less perfectly, into wrought iron.

**MALLEABLE CAST IRON.** Is that produced by extracting a portion of the carbon from ordinary cast iron to assimilate it to the composition of

wrought iron, thus increasing its toughness.

**MALLEABLE IRON.** Properly, wrought iron; when flattened it is said to be "laminable"; when drawn as wire, "ductile".

**MALLEABLE NAILS.** Are generally made in the same way as cast nails but are afterwards rendered malleable by extracting a portion of the carbon to assimilate them to the composition of wrought iron and thus increase their toughness.

**MALLET.** A wooden hammer.

**MALM.** Or washed clay, is an artificial imitation of natural marl made by mixing clay and chalk in a wash mill.

**MALM CUTTERS.** A term applied to bricks made from a loamy earth or clay dug in the autumn; the clay is mixed with water and a proportion of ground chalk and tipped at once into a mixing mill. Malm cutters are of a yellowish-buff colour, soft and uniform in texture. "Best" malms are used for gauged arches, moulded quoins, and general rubbed work.

**MALM PAVIORS.** Sound hard building bricks, of a browner colour than "best malms".

**MALM PICKINGS.** Are the rejected bricks from the better qualities; used for inferior work.

**MALMROCK.** A calcareous sandstone.

**MALM SECONDS.** Bricks similar to "best malms" but not quite equal in quality; used for facing bricks.

**MALTESE CROSS.** A cross with equal arms expanded at the end.

**MALT FLOOR.** The floor of a malt-drying room.

**MALTHA.** A native bitumen used by the ancients for plastering walls.

**MAMMISI.** Small Egyptian temples.

**MANCHI.** In heraldry, a bearing representing a sleeve with long, hanging ends.

**MANDAMUS.** A writ or command issuing from the Queen's Bench directed to any person, corporation or inferior court, requiring them to do some particular thing therein

specified which appertains to their office and duty.

**MANDEREL.** A revolving shank to which turners affix their work in the lathe.

**MANDREL FRAME.** The head stocks or frame bolted to the end of a lathe bed, for the purpose of supporting the mandrel.

**MANDRELS.** Are wooden cores of different sizes; used for moulding the lead round, in forming pipes out of sheet lead.

**MANÈGE.** The exercising ground of a riding school.

**MANGANATE.** A salt of manganic acid.

**MANGANESE.** A hard brittle metal of a greyish-white colour.

**MANGANESE BRONZE.** An alloy, generally white, of pure copper with from 2 to 3 per cent. of manganese.

**MANGANESE BROWN.** Consists of an oxide of manganese.

**MANGANESIAN.** Pertaining to or consisting of manganese.

**MANGANITE.** An ore of manganese.

**MANGER.** A trough of wood, iron or stone, for horses and cattle to eat out of.

**MANHEIM GOLD.** An alloy of copper, zinc and tin; used as an imitation of gold.

**MANHOLE.** An opening formed over a sewer, or by the side of it, large enough to admit a man to enter to do repairs, etc.

**MANHOLE.** An opening in a boiler, used as an entrance when the boiler requires cleaning; it is covered by a strong plate bolted to the boiler plating, so as to be steam-tight.

**MANHOLE COVER.** A strong plate of iron bolted over the manhole, so as to be removable when required. In the case of a sewer "manhole," the manhole cover is generally perforated.

**MANIFOLDING.** The practice of taking several copies of a document at once upon thin paper.

**MANILLA HEMP.** A fibrous material made from *Musa textilis*, from which ropes and cables are made.

**MANILLA PAPER.** A strong brown paper made from manilla hemp.

**MANILLA ROPE.** Rope made from manilla hemp.

**MANIPLE.** Originally, a napkin for wiping the chalice.

**MANOMETER.** An instrument for measuring the density of the air or other gas.

**MANOR.** The land belonging to a lord and kept in his own possession.

**MANOR HOUSE.** The house of a manor.

**MANSARD or CURB ROOF.** A roof originally designed by the French architect François Mansard; each side of the roof is in two slopes, the lower one steep and the upper at a flatter pitch.

**MANSE.** In Scotland, the residence of a clergyman attached to a church.

**MANSEFIELD STONE.** The two principal varieties of this stone are red and white in colour; weathers well, and is well adapted for fine ashlar work, carvings, columns, etc.

**MANSION.** A house of some size and pretension; generally applied to a large house in the country.

**MANSION HOUSE.** The Lord Mayor of London's official residence; the house of the lord of a manor.

**MANTEL or MANTEL TREE.** A beam, slab or foreplate resting on the jambs of a fireplace.

**MANTELET.** In fortifications, a kind of movable parapet to protect besiegers in their advances.

**MANTEL-PIECE.** An ornamental shelf over a fireplace, in front of a chimney; it generally consists of something more than a shelf.

**MANTEL-SHELF.** A shelf above the facing of a fireplace.

**MAN-TIGER.** In heraldry, a monster with a human face and the body of a lion or tiger.

**MANTLE.** A covering to a burner which becomes incandescent when gas is lit.

**MANTLE.** A mantel.

**MANUAL, MANUAL LABOUR.** Pertaining to or performed by hand.

**MANUFACTORY.** A factory; a place where goods are manufactured.

**MANUFACTURE.** To make or fabricate from raw materials; to work up into suitable forms for use.

**MANUFACTURER.** One who manufactures.

**MAPLE.** Is a wood, light, both in colour and weight; it is perhaps better known as "bird's-eye maple"; the bird's eyes are the specks or small curly grain-like knots on the surface; chiefly used in high-class fittings and by cabinet-makers.

**MARBLE.** A calcareous stone of compact texture; it is generally used in buildings for pillars, chimney-pieces, etc. The marble generally used is white, which chiefly comes from Greece and Italy. Veined and coloured marbles are found in Derbyshire and Devonshire. Black and coloured marbles are also found in Ireland. The term marble is usually given to any limestone which is hard and compact enough to receive a fine polish.

**MARBLE CEMENT.** Consists of plaster of Paris soaked in a saturated solution of alum and baked in an oven and afterwards ground to a powder; when required for use it is mixed with water like plaster and applied.

**MARBLE EDGED.** With marbled edges.

**MARBLER.** One who veins paper or other material in imitation of marble.

**MARBLING.** The art or practice of painting, on a prepared painted surface, an imitation of the material as exact as the skill of the painter will permit.

**MARCASITE.** Iron pyrites.

**MARCHIONNESSES.** Are slates 22 x 12; they are sold by the thousand of 1,200.

**MAREZZO MARBLE.** A kind of plaster (the basis of which is plaster of Paris) made to imitate marble.

**MARGIN.** The flat part of a style or rail in framed work; the edge or border of anything.

**MARGIN DRAUGHT or DRAFT.** A narrow flat surface or margin, about an inch wide, worked with a chisel round the edges of the face of a

stone when the face is hammer dressed.

**MARGIN LIGHT SASH DOOR.** Is a door in which the part above the lock rail is prepared for glass, and having two vertical and two horizontal bars placed so as to form a narrow margin about four inches wide.

**MARGODE.** A hard bluish-grey stone.

**MARIGOLD WINDOW.** Same as Catherine-Wheel Window, or Rose-Window.

**MARINE ACID.** Hydrochloric acid.

**MARINE GLUE.** Consists of india-rubber dissolved under a gentle heat in mineral naphtha or coal tar; when melted powdered shellac is added, and when mixed it is poured out on metal plates to cool; applied same as ordinary glue; suitable for work exposed to wet or moisture.

**MARINE GREEN.** Is a pigment produced from copper, etc.

**MARINE STORE.** A place where old iron, etc., is bought and sold.

**MARKET CROSS.** A cross formerly set up in a market place.

**MARKET PRICE.** The current price of commodities at any given time.

**MARL.** A rich earth of clay and lime in varied proportions.

**MARLING.** The process of wrapping a rope with spun yarn or twine to prevent its being chafed.

**MARLITE.** A variety of marl.

**MARLITIC.** Of the nature of marlite.

**MARLPIT.** A pit where marl is dug.

**MARLS or CALCAREOUS CLAYS.** Are those containing a large proportion of carbonate of lime.

**MARLSTONE.** The calcareous and sandy strata dividing the upper from the lower lias clays.

**MARMATITE.** A black mineral; sulphide of zinc.

**MARMOLITE.** The silicate of magnesia.

**MARMORATED.** Variegated like marble.

**MARMORATUM.** A cement formed of pounded marble and lime well beaten together; used by the ancients.

**MARMORATION.** A building with marble.

**MARMOREAL** or **MARMOREAN.** Made of marble; belonging to or like marble.

**MARONE.** Is of a class of impure colours, composed of black and red, black and purple, or black and russet pigments, or with black and any other denomination of pigments in which red predominates.

**MARONE LAKE.** Is a preparation of madder, of great depth, transparency and durability of colour; works well in water, glazes and dries in oil, and is in all respects a good pigment.

**MARQUETRY.** Chequered or inlaid work; work inlaid with variegation; a sort of veneering, representing flowers, birds or other figures, with small pieces of different sorts of wood; sometimes called "parquetry".

**MARSHAL.** In heraldry, to arrange coats in a shield.

**MARSH GAS.** Fire-damp exhaled from marshes.

**MARS ORANGE.** Is a pigment or ochre produced from a natural coloured clay.

**MART.** A market; a market-place.

**MARTELO.** A strong circular stone fort of two storeys, surmounted by a heavy swivel gun; so called as originally provided with a bell which was struck with a hammer on the approach of pirates, against whom they were first reared as a defence.

**MARTIN'S CEMENT.** A cement manufactured by recalcining plaster of Paris with different substances; used chiefly for interior work.

**MARTLET.** In heraldry, a bird without legs or beak.

**MARVEL FLUID.** Is a patent preparation for washing off old paint.

**MASCLE.** In heraldry, a lozenge perforated; a lozenge-shaped armour plate.

**MASH HAMMER.** A small hand hammer with a square head; used by masons in working mouldings, rebates, etc., which are cut by means

of iron chisels steeled at their cutting edges.

**MASK** or **NOTCH HEAD.** A kind of corbel, the shadow of which resembles that of the human face.

**MASON.** One who prepares and builds in stone.

**MASONRY.** The use of this term is confined in England exclusively to stonework.

**MASON'S JOINT.** Is that in which the bed joints are struck back along the upper edge, the lower edge being cut with the trowel and left overhanging so as to form an angular V section.

**MASON'S MOULD.** A mould or pattern, usually made of zinc, shaped as required; also called "caliber".

**MASQUES.** Grotesque faces used to fill vacant places, on friezes, panels of doors, keys of arches, etc.

**MASS.** The quantity of matter which a body contains; bulk; a heap.

**MASS FACTOR.** The "mass factor" of an armature corresponds with the "watts" generated per revolution. To determine it for any particular machine, divide the output in "watts" by the speed in revolutions per minute.

**MASSICOT.** Which is the basis of red lead, is produced by exposing the metallic lead on a flat hearth in an oven or reverberatory furnace, which should be kept at a low heat and the film of oxide (massicot) removed as soon as produced; it is then ground, thereby a yellow coloured fine powder is produced, which is afterwards washed; the yellow oxide of lead; used as a yellow pigment. Massicot differs from litharge in being formed at a temperature insufficient to cause fusion.

**MASSIVE.** Heavy, weighty, ponderous; imperfectly crystallised without regular form.

**MASTABA.** The most usual form of Egyptian tomb.

**MASTER BUILDER.** The chief builder; a builder who employs workmen.

**MASTER KEY.** A key that opens many locks.

**MASTIC.** A resinous gum obtained from the Mediterranean; chiefly used for making varnish; it is soft and works easily.

**MASTICS.** Are varieties of cements that consist of brick, burnt clay, or limestone, powdered, mixed with oil and litharge, or a similar drier.

**MASTIC VARNISH.** A varnish made by heating mastic over a slow fire, with oil or turpentine, it being afterwards strained.

**MATCH.** In mining, a lighted rope used for firing charges.

**MATCHED BOARDING** or **MATCH BOARDS.** A series of boards or boarding put together with a grooved and tongued joint, a bead or chamfer being worked on each board to break or conceal the joint.

**MATERIALS.** A term embracing any, or all, of the wood, stone, etc., used in a building.

**MATERIATIO.** A term applied by Vitruvius to the timber work of a roof.

**MATERIATION.** The felling of timber for building purposes.

**MATERNITY HOSPITAL.** A lying-in hospital.

**MATHEMATICS.** The science which treats of magnitude and number, or of whatever can be measured or numbered.

**MATLOCK.** A kind of pickaxe with one broad end.

**MATRIX.** In dyeing, one of the five simple colours from which combinations are formed; a mould; the rock in which a mineral or fossil is embedded.

**MATRIX.** In concrete, is the binding material (such as lime or cement) in which the hard broken material or "aggregate" is embedded.

**MAT SINKING.** A space sunk in a floor to take a mat, so as to allow a door to open, or to prevent anyone stumbling over the mat.

**MATT.** Imperfectly reduced metal.

**MAUL.** A large heavy wooden hammer.

**MAUL STICK.** A stick used by painters to steady the hand while sign writing, etc.

**MAUNDRIL.** A pick with two shanks.

**MAUSOLEAN.** Pertaining to a mausoleum; monumental.

**MAUSOLEUM.** A pompous funeral monument; a costly sepulchre.

**MAXIMA AND MINIMA.** The greatest and least values of a variable quantity.

**MAZARINE.** A deep blue colour.

**MAZE.** A confusion of intricate windings and turnings, sometimes formed in gardens by means of paths and bushes.

**MEAD** or **MEADOW.** Grass land; field land appropriated to the production of hay.

**MEADOW ORE.** Conchoidal bog iron ore.

**MEAN EFFECTIVE PRESSURE (M.E.P.).** Is the average of the pressure recorded by the indicator at different points of the stroke above the exhaust or back pressure. It is the pressure which would have to act upon the piston throughout the entire stroke to enable the engine to develop the same power as under the indicated conditions.

**MEASURE.** A series of beds; strata.

**MEASURE.** The extent or dimensions of a thing; a standard of measurement; a definite unit of capacity or extent; a tape or instrument for measuring.

**MEASURE** or **HUNDRED OF LIME.** Equals one cubic yard.

**MEASURE AND HALF.** A term formerly applied to a door moulded on one side and square on the other.

**MEASUREMENT.** The dimension ascertained by measuring; the act of measuring.

**MEASURER.** In Scotland, a quantity surveyor; an "ordained surveyor" has a licence to practise.

**MEASURING UP.** Means taking dimensions.

**MEASURING UP.** Measuring on the job variations on contract work that has been done; this is frequently done when the contract is finished, but it should be done as the work proceeds, as it frequently happens that the work is out of sight and some parts forgotten and invariably leads to a dispute.

**MECHANIC.** A skilled workman ; an artificer.

**MECHANICAL.** Constructed according to the principles of mechanics.

**MECHANICAL CARPENTRY.** Is that which relates to the disposition of the timbers of a building in respect of the relative strength and strains to which they are subjected.

**MECHANICAL POWERS.** Is a name given to seven simple machines, *viz.* the lever, the wheel and axle, the pulley, the inclined plane, the wedge and the screw. These are the elementary contrivances by the combination of which all other machines are formed, however simple or complicated they may be.

**MECHANICS.** That science which treats of the action of force in producing equilibrium or motion.

**MECHANISM.** Mechanical action ; the structure of a machine.

**MEDALLION.** In architecture, any circular tablet on which figures, flowers, etc., are embossed or carved in relief.

**MEDLEVAL.** Belonging or relating to the Middle Ages.

**MEDLEVAL ARCHITECTURE.** That built during the Middle Ages, including the Norman and Early Gothic styles.

**MEDINA CEMENT.** A natural cement made by burning nodules ; found in geological formations ; sets rapidly, but attains no great ultimate strength.

**MEDIUMS.** A size of paper,  $22\frac{1}{4} \times 17\frac{1}{2}$ , between demy and royal.

**MEDJIDIE.** In heraldry, a Turkish order of knighthood.

**MEDULLARY RAYS or TRANSVERSE SEPTA.** Are lines radiating from the centre of trees ; they are more strongly marked in oak, beech, alder, plane and sycamore, than perhaps any other wood, and present, if cut obliquely, a beautiful figured appearance called "silver grain," "felt" or "clash," due to the cellular tissue of the medullary rays being cut nearly in the plane of the lamination.

**MEDUSA.** A gorgon whose head (which turned beholders to stone

was cut off by Perseus and placed by Minerva on her *Ægis*.

**MEETING HOUSE.** A dissenting place of worship.

**MEETING JOINTS.** Are those used to guard against open joints occurring on the shrinking of the wood ; such joints as are grooved and tongued, rebated, etc., would be termed meeting joints.

**MEETING RAIL.** The bottom rail of a top sash or the top rail of a bottom sash, on which the sash fastener is generally fixed.

**MEETING STILE.** The stile of a door on which the lock is placed ; in a pair of doors, etc., the meeting stiles are the two stiles coming together when the doors are closed ; generally rebated.

**MEGALICHTHYS.** A fossil ganoid fish found in coal formations.

**MEGALITH.** A megalithic monument.

**MEGALITHIC.** Composed of large stones.

**MEGALOSAURUS.** A gigantic saurian, whose fossil remains have been found in the oolite formation.

**MEGOHM.** One megohm is equal to one million ohms. The term is used in discussing very high resistances.

**MEIONITE.** A variety of scapolite.

**MELACONITE.** A powdery black oxide of copper.

**MELANITE.** A black variety of garnet.

**MELAPHYRE.** A variety of black porphyry.

**MELTING POINT.** Is the temperature at which metal when subject to heat becomes liquid.

**MEMBER.** A term applied to a moulding in a series of mouldings, such as a cornice with six members, or a base of three members ; any part of a truss or trussed girder between two joints.

**MEMEL DEAL.** Is very similar to Dantzic except that it is not considered quite so strong ; the balks are smaller, being from thirteen to fourteen inches square.

**MENACHANITE.** A variety of titanic iron from Menadium, Cornwall.

**MENHIR.** A kind of rude obelisk.

**MENISCUS.** A lens, convex on one side and concave on the other.

**MENSURATION.** The application of the science of arithmetic to geometry, by which is discovered the magnitude and dimensions of any geometrical figures, whether solid or superficial.

**MERCHANT BAR.** An inferior quality of wrought iron made by piling up short lengths of puddled bars, raising them to a welding heat, and passing them through rollers, thus forming them into a single bar, which gives the iron a fibrous structure and increases its strength somewhat; it is very inferior, being hard and brittle, and is only used for the very commonest purposes.

**MERLON.** The solid part of an embattled parapet, standing up between the embrasures.

**MEROS** or **MERUS.** The plane surface between the channels of a triglyph.

**MESAULA.** A passage, gallery or lobby; an entry or court; called *itiner* by Vitruvius.

**MESSUAGE.** A dwelling house and adjoining land, as garden, etc.

**MESTLING.** Brass ornaments; candlesticks; sacred utensils used in Anglo-Saxon times.

**METACENTRE.** A point in a floating body, on the position of which its stability or equilibrium depends.

**METAL.** Stones broken small for roads; glass in a state of fusion; an opaque body or substance insoluble in water, fusible by heat, a good conductor of heat and electricity, and having a peculiar lustre known as the metallic lustre. The term "metal" is sometimes used as an equivalent for cast iron.

**METAL LATHS.** Are laths made from 28 B.W.G. iron in any length up to three feet, fixed in the same way as the ordinary wood laths in plastering; the key for the plaster is afforded by the dovetail form into which the metal is bent.

**METALLIC.** Containing or consisting of metal; of the nature of metal.

**METALLIC CEMENT.** Is that having a metallic lustre and is sometimes made by mixing ground slag from copper melting works with ordinary cement.

**METALLIC LUSTRE.** A lustre peculiar to all metals.

**METALLIC OXIDE.** A metal combined with oxygen.

**METALLIC ROOF COVERINGS.** Lead, copper, zinc and iron.

**METALLIC VEIN.** A mineral vein containing metallic ore.

**METALLIFEROUS.** Producing or yielding metal.

**METALLIFORM.** Having the form of metal.

**METALLINE.** Consisting of or containing metal.

**METALLING.** Stones broken small, or other material to give firmness and solidity to common roads and railways.

**METALLISE.** To form into metal; to give metallic properties to.

**METALLIST.** A worker or one skilled in metals.

**METALLOGRAPHY.** An account or the science of metals.

**METALLOID.** A metallic base of an alkali and earth; a non-metallic elementary body.

**METALLOIDAL.** Having the appearance of a metal.

**METALLURGIST.** One who works in metals.

**METALLURGY.** The art of working metals from the state of ore to the utensil; properly, the separation of the metal from the ore.

**METAMORPHIC.** Said of stratified rocks that have, since their original disposition, been changed in structure under the influence of heat, chemical action, etc.

**METAMORPHIC SANDSTONES.** Are those which have been subjected to heat; they are well adapted for road metal, being too hard to work for building purposes.

**METATOME.** The space or interval between two dentils.

**METE.** To measure; measure; limit; boundary.

**METER.** An instrument that measures; as a gas-meter, etc.

**METER.** A contrivance by which the amount of electrical energy used by a consumer is known and registered. Usually there are two kinds: (a) that measuring watt-hours (the most accurate) and (b) that measuring ampere hours (approximately correct); the latter involves the assumption that the voltage is constant.

**METHYLATED SPIRIT.** Spirit of wine mixed with 10 per cent. wood naphtha, or methylic spirit.

**METHYLENE.** A highly volatile and inflammable liquid, obtained from the distillation of wood.

**METOCHE.** The spaces between two denticuli in the Ionic entablature; it was also applied by Vitruvius to the space between the triglyphs of the Doric order.

**METOPÉ.** The space between the triglyphs of the Doric frieze; also the space between the dentils.

**METRE.** A French measure equal to 39·37 English inches.

**METRIC.** Pertaining to the system of weights and measures of which the metre is the unit.

**METROLOGY.** The art or science of measuring.

**METROPOLIS.** The chief ecclesiastical city or capital city of a country.

**MEWS.** Stables; the royal stables in London.

**MEZUZOTH.** Pieces of parchment which were anciently fixed on the door-posts of houses.

**MEZZANINE.** A storey of small height introduced between two higher ones; a window in it.

**MEZZO-RELIEVO.** Carved or sculptured work in which the figures stand out half their natural projection from the surface on which they are carved; between alto- and basso-relievo; demi-relievo; middle relief.

**MEZZO-TINT.** A process of engraving on copper or steel in imitation of painting in Indian ink.

**MICA.** An important ingredient in the composition of rocks consisting of silica, alumina, oxide of iron and potash; cleavable into elastic plates of extreme thinness;

it is distinguished from talc by its elasticity; used in Russia instead of window glass.

**MICACEOUS SANDSTONES.** Are those containing a large proportion of mica distributed over the planes of bedding.

**MICA SCHIST or MICA SLATE.** Consists chiefly of mica and quartz in thin layers; it splits easily into slates; of a grey or silvery-grey colour; used for hearth-stones, flagging, etc.

**MICRO-FARAD.** See Farad.

**MICROGRAPH.** A kind of pantograph for extremely minute engraving.

**MICROPHONE.** An instrument for increasing the intensity of low sounds.

**MICROSCOPE.** An optical instrument by which objects are so magnified that details invisible to the naked eye are clearly seen.

**MIDDEN.** A dung hill; a dust hole or ash pit.

**MIDDLE AGES.** The period between the fall of the Roman Empire and the revival of letters in the fifteenth century.

**MIDDLE GUTTER.** A gutter between two roofs.

**MIDDLE POSET.** Same as King Post.

**MIDDLE QUARTERS.** A term applied to the four quarters of a column divided by the horizontal sections forming angles of 45° on the plan.

**MIDDLE RAIL.** Same as Lock Rail; any rail in framing, etc., upon a level with the hand.

**MIDLING.** A timber trade term used to denote ordinary qualities of fir timber.

**MIDFEATHER.** Same as Parting Slip.

**MIDFEATHER or DEFLECTING PLATE.** The upright piece of sheet iron beneath ovens, which not only causes the flame to properly heat the whole of the oven bottom, but it also causes the flame to come equally across the top and down the oven side as nearly as possible in the middle; if it were not for this the flame would travel along the

back of the flues and heat the oven very unequally.

**MIEHITE.** A variety of magnesian limestone.

**MILD STEEL.** Steel containing a small percentage from 0·2 to 0·5 of carbon ; used instead of wrought iron sometimes.

**MILE.** The English or statute mile of 1,760 yards, the English geographical mile being one-sixtieth of a degree of latitude, or about 2,025 yards.

**MILEAGE.** Length in miles ; expenses per mile.

**MILE STONE.** A stone set to mark the miles.

**MILL.** A factory ; a machine for grinding grain, etc.

**MILL COG.** The cog of a mill-wheel.

**MILL DAM.** A dam or mound to obstruct a water-course.

**MILLED.** Passed through a mill ; having the edges serrated.

**MILLED LEAD.** Is so termed by reason of the rolling or milling it undergoes in order to form it into thin sheets. The process of milling is as follows : a plate of lead four or five inches thick and seven to eight feet square is cast in an iron frame. When set, but before the lead is cold, one end of the iron frame is removed and the plate of lead drawn out and passed between a couple of immense steel rollers fixed one above the other and driven round by steam power. The plate of lead is then rolled backwards and forwards until it is thin enough for the purpose for which it is intended, hence the name of "milled lead". The quality of lead may be judged by its softness and malleability, hardness denoting the presence of impurities.

**MILLEPEDE.** The wood louse.

**MILLIAMPERÈ.** The one thousandth part of an ampère ; the term is used in measuring very small currents.

**MILLIARE.** A Roman mile, consisting of 1,000 paces of 5 feet each = 5,000 feet ; the Roman foot being taken at 11·6496 English inches, the Roman mile would be 1,618 English

yards, or 142 yards less than the English statute mile.

**MILLIER.** A weight equal to 1,000 kilometres.

**MILLIGRAMME.** The thousandth part of a gramme, ·06154 of an English grain.

**MILLION.** A thousand thousands.

**MILLILITRE.** The thousandth part of a litre, ·06103 cubic inch.

**MILLIMETRE.** The thousandth part of a metre, ·03937 inch.

**MILL-POND.** A reservoir of water raised for driving a mill-wheel.

**MILL-RACE.** The current of water that drives a mill-wheel.

**MILLSTONE.** A stone used for grinding grain.

**MILLSTONE GRIT.** A hard, coarse, gritty sandstone.

**MILLWRIGHT.** One who constructs mills or their machinery.

**MIMETENE.** Mineral arseniate of lead.

**MINA.** A Greek weight of 100 drachmæ ; a coin worth 100 drachmæ. The Attic mina = £4 1s. 3d., the Æginetan = £5 14s. 7d.

**MINARET.** In Mohammedan architecture, a tall slender turret, spire or steeple attached to a mosque, of several storeys with balconies, from which the priest summons the people to prayers.

**MINE.** An excavation in the earth out of which minerals are dug ; a subterraneous passage dug under a fortification to blow it up ; crude ore or iron stone.

**MINE IRON.** Is that smelted from the ore only without the admixture of slag.

**MINERAL.** Any inorganic substance found in the earth.

**MINERAL ACIDS.** Acids of inorganic origin ; chiefly applied to sulphuric, hydrochloric, nitric and phosphoric acid.

**MINERAL BLACK.** Is a native and impure oxide of carbon of a soft texture ; found in Devonshire.

**MINERAL BROWN or DEEP CAP-PAGH BROWN.** Is a pigment produced from bog earth and man-ganese.

**MINERAL CAOUTCHOUC.** An elastic mineral pitch or bitumen.

**MINERAL GREEN.** Is a pigment made from bibasic carbonate of copper; it weathers well.

**MINERALOGIST.** One versed in the science of minerals, or who treats of their properties.

**MINERALOGY.** The science of minerals.

**MINERAL RESIN.** A resin from minerals, as asphalt.

**MINERAL TAR.** Is a natural substance obtained from Burmah.

**MINION.** An iron ore which makes an excellent hydraulic cement when mixed with a proper quantity of lime.

**MINIUM.** Red lead; a beautiful deep red colouring matter much used in the arts.

**MINOR.** The smaller drains of a system of agricultural drainage, which each independently discharges into a main or submain, themselves receiving no other flow than that which they obtain from the soil. They are usually more or less parallel to one another and are laid in every furrow or sometimes "switched" across the "lands".

**MINOR AXIS.** Or the conjugate axis, is the shortest diameter of an ellipse.

**MINSTER.** The church of a monastery; a cathedral church.

**MINT.** A place where money is coined by public authority.

**MINUS.** The sign of subtraction (-).

**MINUTE.** The sixtieth part of the lower diameter of the shaft of a column.

**MIocene.** A term applied to the middle division of the tertiary strata.

**MIRABILITE.** The effervescence on the soil among salt springs; used as a substitute for soda in manufacturing glass.

**MIRADORE.** A balcony or gallery commanding an extensive view.

**MIRROR.** A looking-glass; a piece of glass silvered on the back.

**MISER or MUD SHELL.** Is a large auger, the body being of a conical form or closed with clacks to prevent the loose stuff from falling back into the bore; used for removing the sand

blown within iron cylinders by the pressure of the water while sinking them.

**MISERERE.** Projecting brackets in the under side of the seats of stalls in churches, more or less ornamented with carvings; a small movable seat attached on a horizontal axis to a stall in a church or cathedral; used as a rest for aged ecclesiastics.

**MISERING.** The method of boring with an auger or "miser" to ascertain the character of the subsoil for foundations, etc.

**MISPICKEL.** An arsenical ore.

**MISY.** The persulphate of iron, with excess of base.

**MITCHELL.** Purbeck stone ready hewn.

**MITHRAS.** The genius of the sun worshipped by the Persians, as the supporter and protector of men, etc.; represented in ancient sculptures with his knee upon a bull and plunging a dagger in his neck.

**MITIS or SCHEELE'S GREEN.** Are pigments produced from arsenites of copper, and are very poisonous.

**MITRE.** To join at the angle of 45°; an angle of 45°.

**MITRE.** An intersection of mouldings or timber, usually, although not necessarily, at the angle of 45°.

**MITRE ARCH.** An arch of two stones which bridge over the opening like the sides of a roof.

**MITRE BOX.** A trough for cutting mitres; it has two sides and a bottom, open at the ends, and has two saw cuts on the vertical sides at angles of 45° with them.

**MITRE CAP.** The cap on the newel of a staircase, the handrail of which mitres into it.

**MITRE CLAMP.** A clamp mitred at the ends so as not to show the end grain, a corresponding mitre being made on the board to be clamped.

**MITRED or SECRET DOVETAIL JOINT.** Is one in which the dovetails are hidden from view in the mitre.

**MITRED or SPLAYED GROUNDS.** Those having the edge next the plastering splayed or bevelled to form a key for plaster.

**MITRED AND CUT STRING.** In staircasing, a string cut into steps to receive the treads and mitred to the risers.

**MITRED BORDERING.** To a hearth, is generally an oak slip, two inches by half an inch, mitred at the angles and sunk flush in a rebate in the floor boards round three sides of a hearth-stone; sometimes it only runs across the end grain of the boards.

**MITRED DOVETAIL.** Same as Secret Dovetail.

**MITRE JOINT.** A joint in which the line that bisects the angle formed by the two pieces is the line of junction or joint, thus:—



**MITRE WHEEL.** A wheel having teeth formed so as to work at an angle of  $45^\circ$  to the centre line of the shaft on which it is fixed, to move with another wheel of equal size fixed on a shaft at right angles to the former one.

**MIXED or BEST.** A term applied to deals of first and second qualities when not sorted.

**MIXED ANGLE.** An angle of which one side is a curve and the other a straight line.

**MIXED FIGURE.** One composed of straight lines and curves.

**MIXTILINEAR.** Containing a mixture of lines, rectilinear, curvilinear, etc.

**MOAT.** A ditch round a fortress; to surround with a ditch.

**MOCK LEAD, MOCK ORE, WILD LEAD, BLACK LEAD or BLACK JACK.** A ponderous black mineral which does not readily incorporate in the fire; sulphuret of zinc.

**MODEL.** A pattern used in moulding; a pattern to copy; to form or work after or for a model, especially in some plastic material.

**MODELLER.** One who models, especially plastic materials.

**MODELLING.** The making of a model, generally with some plastic material, from which a work of art is to be executed.

**MODERATOR LAMP.** A lamp with a contrivance for regulating the supply of oil to the wick

**MODILLION.** The small bracket-shaped members or ornaments in the Corinthian cornice; they are similar to a mutule but larger and carried out into a block and carved into the form of an enriched bracket or console and giving support to the larmier or drip.

**MODILLION CORNICE.** Is a cornice used in the Ionic and Corinthian orders, and has its bed moulding projecting at regular intervals into modillions supporting the corona instead of mutules.

**MODULAR PROJECTION.** That which is regulated by a module.

**MODULATION.** The proportion of the different parts of an architectural order.

**MODULE.** Is a measure of proportion used in classical architecture, by which the parts of an order or of a building are regulated; the semi-diameter of a column or thirty minutes; the radius of a column just over the base.

**MODULUS OF ELASTICITY.** Is the weight in pounds which would extend a bar of material to double its original length or the ratio of the stress per unit section to the strain per unit of length.

**MODULUS OF RUPTURE.** Is the intensity of stress at the top and bottom of a rectangular beam at the instant of rupture by a load acting on the middle of the beam.

**MOELLON.** Rubble stone filled in between facing walls or the spandrels of a bridge.

**MOELLON.** Rough stones fit for building (a French term).

**MOINEAU.** A small flat bastion.

**MOLASSE.** A soft tertiary sandstone.

**MOLE.** A pier of stone, or a large mound of stones laid in the sea before a port for protection; also applied by the Romans to a kind of circular mausoleum.

**MOLE DRAINING.** The mechanical drainage of clay land by means of an iron "mole" or borer, propelled horizontally by horse or steam power.

**MOMENT OF A FORCE.** The product of the force and the perpendicular from where it acts to the line of application.

**MOMENT OF INERTIA.** A mathematical value which is theoretically proportionate to the resistance a member offers to cross bending. It is equal to the sum of the product of the area of each of the elements into which the section may be divided, each multiplied by its perpendicular distance from the neutral axis.

**MOMENT OF RESISTANCE.** The tendency of a member under a cross load to resist bending round a given point as measured by the sum of the product of the resistance of each of its particles to direct stress, each multiplied by its perpendicular distance from the neutral axis.

**MOMENTUM.** The impetus, force or quantity of motion in a moving body.

**MONA MARBLE.** A marble found in the Isle of Anglesea.

**MONASTERY.** An abbey or a convent; a house of religious retirement.

**MONEY MARKET.** The transactions of the Stock Exchange and other financial establishments.

**MONIAL.** An old way of writing "mullion".

**MONKEY.** The term applied to the iron weight of a pile engine which drives the piles down; it is usually from eight to fifteen hundredweights in weight; when heavier it is generally termed a hammer or ram.

**MONKEY TAIL.** The vertical spiral at the end of an iron hand-rail.

**MONKEY TAIL BOLT.** A bolt at the top of a very high door, and having a long end to it so as to be reached easily from the ground.

**MONKEY WRENCH.** A spanner with a movable jaw, which can be adjusted by a screw or wedge to the size of the nut which it is required to turn.

**MONOCHROMATIC.** Presenting rays of one colour only.

**MONOCHROME.** A painting in tints of one colour only.

**MONOCLINAL.** Said of strata dipping continuously in one direction.

**MONOCLINIC.** Having one of the axes obliquely inclined.

**MONOLITH.** A column or obelisk consisting of a single stone.

**MONOLITHIC.** Consisting of a single stone; statues, columns and pillars were formed by the ancients out of large blocks of stone or marble.

**MONOMETRIC.** Having the axes equal or similar.

**MONOMIAL.** A quantity consisting of a single term.

**MONOPTERAL, MONOPTERON.** A temple which has no cella but consists of columns disposed in the form of a circle, covered with a conical roof.

**MONOPTEROS.** Same as Monopteral.

**MONOSTYLE.** Of one shaft; of one style.

**MONOTA.** A vase with one handle.

**MONOTOMOUS.** Having cleavage distinct in only one direction.

**MONOTRIGLYPH.** An intercolumniation of only one triglyph and two metopes, or the interval between the columns of the Doric portico where a space is left sufficient for the insertion of one triglyph only between those immediately over two contiguous columns.

**MONSTRANCE.** In the Roman Catholic Church, the vessel containing the consecrated wafer or host, and carried about in processions or placed on the altar.

**MONTANT.** A French term for an upright piece in any framework, as a stile, etc.

**MONTICULATE.** Having small projections.

**MONTMARTRITE.** A yellowish limestone.

**MONTOIR.** A horse block; a stone or step used in mounting a horse.

**MONTON.** A miner's term for a heap of ore; a mass of it under amalgamation.

**MONTPELLIER YELLOW.** Is a pigment produced from oxychlorides of lead.

**MONUMENT.** A mausoleum or tomb.

**MONUMENTAL.** Pertaining to or serving as a monument.

**MOON.** In Scotland, a gas globe.

**MOON STONE.** A nearly pellucid variety of feldspar.

**MOOR.** An extensive barren waste, covered with heath and sometimes marshy.

**MOOR.** In Cornish, a quantity of ore in a particular part of a lode, as a "moor of ore," a "moor of tin".

**MOORISH, MOHAMMEDAN or SARACENIC ARCHITECTURE.** Is a combination of Egyptian, Grecian and Roman details, first established by the Arabs about the tenth century; its complicated ornament and lattice work are rich and peculiar.

**MOORLAND.** A tract of moor.

**MOORSTONE.** A species of granite found in Cornwall and other parts of England and Ireland; it is very coarse and chiefly black or white in colour; very serviceable in the coarser parts of a building.

**MOOT HALL or MOOT HOUSE.** In Saxon times, a building appropriated to assemblies on public affairs; a guild hall or town hall.

**MOP BOARD.** A narrow skirting round a room.

**MOPSTICK HANDRAIL.** A hand-rail nearly circular in form.

**MOQUETTE.** A fine tapestry or Brussels carpet; a kind of Wilton carpet.

**MORA** (*Mora excelsa*). Is a timber obtained from Guiana and Trinidad; frequently exceeds one hundred feet in height; it is close grained, like teak, and superior to oak, free from dry rot but subject to starshakes, tough, hard, heavy, generally of a close straight grain of a chestnut-brown colour, frequently beautifully figured; imported in logs eighteen to thirty-five feet long and twelve to twenty inches square.

**MORAINE.** The débris of rocks brought into valleys by glaciers.

**MORDANT.** A kind of glue to make gold leaf adhere; a substance having affinity for certain colours and serving to fix them in dyeing.

**MORDANT.** Is a preparation to make paint adhere to zinc surfaces; it consists of soft water, chloride of copper, nitrate of copper, sal-ammoniac and hydrochloric acid.

**MORESQUE.** Moorish; Arabesque; a Moorish or Arabesque style of decoration.

**MORGUE.** A French term for a mortuary.

**MORONE.** A deep crimson colour.

**MOROXITE.** One of the varieties of native phosphate of lime.

**MORTAR.** A mixture of lime and sand used as a cement for uniting stones and bricks in walls; it generally consists of one part lime, three parts sharp river sand, or one part lime and two parts sand, and one part ashes or coarsely ground coke, etc.

**MORTAR BOARDS.** Are boards, generally about three feet square; used for mixing mortar on, when working on a scaffold, etc.

**MORTAR MILL.** A mill for mixing mortar by means of two large iron rollers working in a pan.

**MORTGAGE.** The temporary grant or pledge of an estate as security for the payment of a debt.

**MORTGAGE DEED.** A deed given by way of mortgage.

**MORTGAGEE.** The person to whom an estate is mortgaged.

**MORTGAGER.** The person who grants an estate as security for a debt.

**MORTISE.** A cavity or hole made in a piece of timber to receive the tenon of another piece, or a hole cut in a stone to receive a baluster, etc.; to cut or make a mortise in; to join by a tenon and mortise.

**MORTISE LOCKS.** Are those concealed from view in a mortise, sunk (if in doors) into the stile and lock rail, therefore only visible on the edge of the door; the bolts shoot into a striking plate screwed into the jamb; the doors must of course be of sufficient thickness to receive the lock.

**MORTMAIN.** Possession of lands or tenements in dead hands, or hands that cannot alienate, such as a corporation.

**MORTUARY.** A dead-house.

**MOSAIC.** A method of representing objects by the inlaying of small cubes of glass, stone, marble, shells, etc., of various colours, cemented on a ground of stucco; it is distinguished from marquetry by being only applied to works of stone, metal or glass.

**MOSAIC GOLD.** A metallic composition of bisulphuret of tin; sometimes employed in ornamental japan work.

**MOSAIC PAVING.** Paving composed of small pieces of tiles or stones fixed or laid on a cement ground.

**MOSQUE.** A Mohammedan temple.

**MOSS LAND.** Land produced by the accumulation of aquatic plants, forming peat bogs of more or less consistency, as the water is drained off or retained in its pores.

**MOSTIC.** A maulstick.

**MOTHER COAL.** Coal with its vegetable structure still visible.

**MOTIF.** The dominant or general idea of a design.

**MOTHER-OF-PEARL.** The iridescent internal layer of nacreous or pearly shells.

**MOTOR GENERATOR.** A continuous current transformer is often so called from its construction, for it has moving parts and is quite different to the alternating current transformer, which has none. A motor generator may be designed to convert continuous current to alternating and *vice vers*?. Also see Rectifier.

**MOTION.** The power of movement; the passing of a body from one place to another. "Quantity of motion" is the product of the mass or moving body by the velocity. "Absolute motion" is that which is independent of any other motion or retarding power. "Angular motion" is the motion of a body as referred to a centre about which it revolves. "Accelerated motions" are those which are continually in-

creasing or diminishing in velocity, while "equable motion" continues uniform. The "laws of motion" are three axioms which have been shown by Sir Isaac Newton as follows: (1) Every body perseveres in its state of rest, or uniform motion in a straight line, until a change is effected by the agency of some external force; (2) any change effected in the quiescence or motion of a body is in the direction of the force impressed, and is proportional to it in quantity; and (3) action and reaction are equal and in contrary directions.

**MOTIVE FORCE.** The sum of force which tends to promote motion.

**MOTOR.** A contrivance for converting electrical into mechanical energy; it absorbs or consumes electricity in doing some work, such as locomotion, etc.

**MOTTLED CAST IRON.** A variety of cast iron which contains both the white and grey varieties, the fractured surface is chiefly white with grey specks, or grey with white spots and patches.

**MOULD.** A fine soft earth, or earth easily pulverised, such as constitutes soil and is rich in decayed vegetable or animal matter.

**MOULD.** The matrix in which anything is cast and receives its form.

**MOULD.** A thin board or sheet of zinc, cut to the profile required; used by workmen as a guide in working mouldings, etc.; a pattern; a template.

**MOULDED BRICKS.** Are those moulded to an ornamental pattern.

**MOULDED WORK.** The work or labour of forming mouldings in stone or wood, either straight or circular. Measured by the area of the moulded face, or the product of the length and girth.

**MOULDER.** One who moulds or casts, especially metal.

**MOULDING.** Any curved surface, or varieties of outline or contour given to the angles of the various subordinate parts and features of buildings, such as in cornices, bases, jambs, etc. The eight sorts of

regular mouldings are as follows : the ovolo, the talon, the astragal, the cyma, the cavetto, the torus, the scotia and the fillet.

**MOULDING.** The process of forming a cavity in sand or loam in order to give its form to metal which is applied in a fluid state.

**MOULD LOFT.** A large room in a dockyard used for shipbuilding.

**MOULDS.** For running plaster cornices, are made of sheet copper or zinc, cut to the profile of the moulding to be formed and fixed in a wooden frame.

**MOULD STONE.** One of the stones of a moulded jamb.

**MOULINET.** A kind of turnstile.

**MOUND.** An artificial bank of earth.

**MOUND.** In heraldry, a ball or globe surmounted with a cross in symbol of empire.

**MOUNT.** In heraldry, a mound or hill covered with grass occupying the base of the shield.

**MOUNT.** To "mount" a drawing is to fix it on a sheet of cardboard or canvas.

**MOUNTAIN ASH** (*Pyrus aneuparia*). The rowan tree.

**MOUNTAIN BLUE.** A native carbonate of copper, both blue and green ; is found in Cumberland ; not durable ; used in oil it becomes green.

**MOUNTAIN CORK.** A variety of asbestos, resembling cork in its lightness.

**MOUNTAIN GREEN.** Green malachite ; a pigment produced from copper.

**MOUNTAIN LIMESTONE.** The carboniferous limestone found between the old red sandstone and the coal measures.

**MOUNTAIN MILK.** A very soft spongy variety of carbonate of lime.

**MOUNTING.** A term applied in Scotland to the furniture of a lock.

**MOUSE.** A small piece of lead fastened to a piece of string ; used by carpenters when putting in sash lines ; it is passed over the pulley and lowered until it is visible through the pocket piece, the end of the

string being fastened to the end of the sash cord ; the cord is pulled over the pulley and fastened to the weight in the usual way.

**MOVABLE DERRICK or JIB CRANE.** Consists of a vertical post supported by two timber back stays, and a long movable jib or derrick hinged against the post below the gearing, by means of a chain passing from the lifting barrel at the foot of the vertical post over a pulley at the head of the jib ; it can be raised, lowered or swung round as required.

**MOYA.** Mud ejected from volcanoes.

**MUD.** Moist soft earth ; mire ; slime.

**MUD CART.** A scavenger's cart.

**MUD HOLE.** The hole by which the sediment is removed from a boiler.

**MUD LARK.** One who cleans out common sewers, docks, etc.

**MUD SILL.** The sill that is laid at the bottom of a river, lake, etc.

**MUD VALVE.** The mud hole.

**MUD WALL.** A wall composed of clay freed from all large stones and soaked with as much water as it will absorb ; it is then well beaten and a quantity of short old straw added. The whole should be well mixed together and moulded after the manner of bricks (only larger) and dried in the sun.

**MUFFLE.** A casing of firebrick formed within the kiln to protect articles of a delicate nature from contact with the fire, which would discolour.

**MUFFLE or POLYSPASTION.** Is a system of pulleys or any number of them combined together ; may be either fixed or movable.

**MUFFLED.** A method of covering a plasterer's mould with a layer of plaster of Paris about an eighth of an inch thick along the profile edge ; done when forming the preparatory cornice of coarse stuff.

**MULGRAVE'S CEMENT.** Is a natural cement made by burning nodules found in geological formations ; sets rapidly, but attains no great ultimate strength.

**MULLER.** A cylinder of granite or hard pebble with a rounded base, about seven inches long and four inches in diameter; used for grinding colours on a slab.

**MULLER GLASS.** The mineral hyalite, which has a glassy lustre, and is as hard as quartz.

**MULLET.** In heraldry, a figure resembling the rowel of a spur

**MULLET.** In joinery, a small block of wood with a groove in it; used in planing panels to thickness.

**MULLION.** An upright division in a window frame; the division between the lights of windows, screens, etc., in Gothic architecture; the stiles or upright divisions in wainscoting are also sometimes called mullions.

**MULTANGULAR.** Having many angles.

**MULTIFOIL.** An opening in tracery having more than five cusps or leaf-like divisions.

**MULTILINEAL.** Having many lines.

**MULTINOMIAL.** A quantity of more than three terms, connected by the sign plus or minus.

**MULTI-PHASE CURRENT.** Power is sometimes distributed by means of special alternating current dynamos, which require three or more wires to carry the power. It is quite different from three-wire systems, etc.

**MULTIPLE.** A number which contains another an exact number of times without a remainder.

**MULTIPLE VALUES.** Symbols which fulfil the algebraical conditions of a problem when several different values are assigned to them.

**MULTIPLICAND.** The quantity to be multiplied.

**MULTIPLICATION.** A rule or process by which any number is multiplied or added to itself a given number of times.

**MULTIPLICATION TABLE.** A table containing the product of all the simple digits and onwards, usually to twelve times twelve.

**MULTIPLIER.** The number by which another is multiplied.

**MULTIPLY.** To add to itself (as a given number) a given number of times.

**MUMMY OR EGYPTIAN BROWN.** Consists of a bituminous animal substance, giving a rich brown tint.

**MUN.** In Cornish, any fusible metal.

**MUNDIC.** Iron or arsenic pyrites.

**MUNIMENT HOUSE.** A strong fire-proof building or apartment for preserving muniments or charters.

**MUNJECT.** A species of madder.

**MUNNION.** A mullion; a vertical sash bar.

**MUNTER.** A term applied in Scotland to a "munting".

**MUNTING.** The short vertical pieces in a door framing, etc.; sometimes called "mullion".

**MUNTZ'S METAL OR SHEATHING.** Is an alloy of sixty parts copper and forty parts zinc; it is cheaper than common brass and more easily rolled.

**MURAGE.** Money paid for keeping walls in repair.

**MURAL.** Belonging to or resembling a wall.

**MURAL ARCH.** That inserted into or attached to a wall.

**MURAL CIRCLE.** A graduated circle, fixed to a wall in the plane of the meridian for determining altitudes and zenith distances.

**MURAL COLUMNS.** Those placed within or against a wall.

**MURAL CROWN.** A crown of gold, indented and embattled, given to the Roman soldier who first mounted a breach in storming a town.

**MURAL MONUMENT OR TABLET.** That affixed to a wall.

**MURCHISONITE.** A variety of feldspar, so called from the geologist Murchison.

**MURDRESS.** In fortifications, a small flanking battlement with loopholes.

**MURIATE OF AMMONIA.** Sal-ammoniac.

**MURICITE.** A variety in various forms of anhydrous sulphate of lime.

**MURRHINE.** A term applied to a delicate kind of ancient ware.

**MURUS.** The wall of a Greek city, in contradistinction to Paries,

the wall of a house, and Maceria, a boundary wall.

**MUSCHEL KALK.** A shell limestone belonging to the new red sandstone series.

**MUSCOVITE.** A variety of mica.

**MUSE.** Any one of the nine goddesses, daughters of Zeus and Mnemosyne, who presided over the liberal arts of the Greeks; Clio was the muse of history; Euterpe, of lyric poetry; Thalia, of comedy and idyllic poetry; Melpomene, of tragedy; Terpsichore, of music and dancing; Erato, of amatory poetry; Calliope, of epic poetry; Urania, of astronomy; and Polyhymnia, of singing and harmony.

**MUSEUM.** A room or building for a collection of natural, scientific, artistic or literary curiosities

**MUSK WOOD.** Timber with a musky smell.

**MUSNUD.** A Persian throne or chair of state.

**MUSTAIBA.** A hard, close-grained wood, inferior to rosewood but harder; obtained from Brazil.

**MUTCHKIN.** A Scotch liquid measure of four gills.

**MUTILATED PEDIMENT.** A pediment with the apex cut away; also called "cut pediment".

**MUTULE.** A projecting block under the corona of the Doric cornice.

**MUTULE CORNICE.** Peculiar to the Doric order; has its bed moulding narrow and projecting at intervals downward and forward in a "mutule," which appears to support the corona and superior members of the cornice, and representing the rafter in the original modern structures. The mutule has its plane with an inclination from the roof towards the horizon and has guttæ or drops depending from it. The under side of the mutule is called its soffit.

**MYNCHERY.** The Saxon name for a nunnery.

**MYRIAGRAMME.** A French measure of weight, containing 10,000 grammes.

**MYRIALITRE.** A French measure of capacity, containing 10,000 litres.

**MYRIAMETRE.** A French measure of length of 10,000 metres.

**MYRIARE.** A French measure of land, containing 10,000 ares.

**MYRICINE.** The part of beeswax insoluble in boiling alcohol.

**MYRRH.** A gum resin from *Balsamodendron myrrha* growing in Arabia and Abyssinia.

## N.

**N.** As a numeral, N stands for nine hundred, and with a stroke over it for nine thousand.

**N.** Applied to drawing paper, signifies "not hot pressed," and has a finely grained surface.

**NAGEL FLUE.** A rock composed of nail-like pebbles.

**NAIL.** A small pointed piece of metal to fasten wood; a measure of length, two and a half or twenty-four inches.

**NAIL HEADED.** Like the head of a nail.

**NAIL HEADED MOULDING.** A Norman moulding formed by a series of small square pyramid-shaped projections on it resembling the heads of nails or square knobs.

**NAILS.** Of which there are about

three hundred varieties, are named chiefly according to their particular use or from the shape of their heads and points. The terms "tenpenny nails," "sixpenny nails," etc., formerly meant their price per 100, but now generally refer to their length. Manufacturers differ as to the lengths corresponding to the different names. The terms "fine," "bastard" and "strong" refer to thickness in different classes, their weight being generally given in pounds per 1,000 and their length in inches. In the Middle Ages nails were frequently used much ornamented, particularly in church doors and the gates of large mansions.

**NAISSANT.** In heraldry, rising or coming forth from some ordinary.

**NAKED FLOORING.** The timber work of a floor for supporting the floor boards, ceiling, or both; the bare joists before the floor boards are laid.

**NAKED OF A COLUMN.** The face or surface of the shaft where the mouldings are supposed to rise.

**NAKED OF A PILASTER.** The surface of the shaft or body of the pilaster from which the projections may be supposed to rise.

**NAKED OF A WALL.** The general plane surface of a wall from which the projections or mouldings rise.

**NAOS.** The chamber or enclosed apartment of a Greek temple. The part of the temple which stood before the naos and comprehended between the wall and the columns of the portico was called the "pronaos," the corresponding part behind being called the "posticum".

**NAPHTHA.** A volatile, limpid mineral oil or fluid bitumen, very inflammable, which exudes from the ground in various parts of the world; now commonly used for lamps.

**NAPHTHALIC ACID.** A crystalline product obtained from naphthaline

**NAPHTHALIN.** A whitish substance obtained from the distillation of coal tar.

**NAPIER'S BONES OR RODS.** A contrivance by Napier of Merchiston in the seventeenth century for facilitating the multiplication and division of high numbers.

**NAPLES YELLOW.** Is generally supposed to have been originally made from a natural volcanic product at Naples; it is a salt of lead and antimony, difficult to grind and not so brilliant as chrome yellow but has the same characteristics.

**NARBERTH FIREBRICKS.** Are similar to the Dinas firebrick; they are made in Pembrokeshire.

**NARROW GAUGE.** In railways, when the rails are placed four feet eight and a half inches apart.

**NARTHEX.** A division in the early Christian churches, near the entrance and separated from the rest of the church by a railing or screen, to which catechumens and penitents were admitted.

**NASSAN MAHOGANY.** Is a hard, heavy variety of deep red colour, and is generally well veined or figured.

**NATANT.** In heraldry, applied to fish represented as swimming.

**NATURAL BED.** In placing building stones in position they should be laid on their natural bed, that is, as near as possible to the position they held before being quarried; stones laid in this way are far more durable. To find the natural bed of a stone which is fossilised, the direction and position of flat shells and fragments of ancient vegetation should be traced. The reason why laying a stone along its natural bed renders it more durable, is that if the bed was laid parallel to the face of the wall it would peel off in layers owing to the action of the wind, rain and weather generally.

**NATURAL CEMENTS.** Are Atkinson's, Harwich, Whitby, Mulgrave's, Calderwood, Medina and Roman cement.

**NATURAL FOUNDATIONS.** Stratum of rock or compact gravel.

**NATURAL SEASONING.** Of timber, consists of stacking in such a way that the air can circulate round each piece, and be protected from the sun, rain and weather generally. Balk timber is best seasoned by putting it under water in a running stream for a few weeks, then stacking it loosely with some protection from the sun, rain, etc.

**NATURAL SLOPE.** Of earth, is the slope which it assumes, *i.e.*, without artificial means being applied.

**NATURAL STEEL OR GERMAN STEEL.** Is the product resulting from imperfect refining.

**NAUMACHIA.** A Greek circus encompassed with seats and porticoes, the arena being sometimes filled with water for the exhibition of sea fights.

**NAUTILUS.** A diving bell requiring no suspension.

**NAVE.** The middle or body of a church extending from the chancel or choir to the principal entrance; also called the "middle aisle".

**NAVE.** The thick piece of timber in the centre of a wheel in which the spokes are inserted.

**NAVIS.** In church furniture, a metal dish or vessel to contain frankincense.

**NAVY.** Originally a labourer employed in cutting canals for navigation; now also a labourer in the construction of railways, etc.

**NEAP.** The pole of a cart; a prop for the front of a cart.

**NEAT.** Applied to cement, means that it is used pure without any mixture of sand.

**NEBULE MOULDING.** A moulding or ornament of the zigzag form, but without angles; chiefly found in the remains of Saxon architecture, in the archivolts of doors and windows.

**NEBULY.** In heraldry, ornamented with wavy lines.

**NECESSARY HOUSE.** An old term for a privy.

**NECK BOLT.** A kneed bolt.

**NECKING OR HYPOTRACHELIUM.** The neck moulding or "necking" of a capital introduced between the capital itself and the shaft of a column.

**NECK MOULDING.** A small moulding surrounding a column at the junction of the shaft and capital; also applied, in joinery, to any small moulding planted on in a similar position.

**NECK OF A CAPITAL.** The space between the astragal on the shaft and the annulet of the capital in the Grecian Doric order; the plain portion from the neck moulding to the chief members of the capital.

**NECK OF A PILASTER.** The portion from the neck moulding to the underside or commencement of the truss.

**NECROLOGY.** An obituary formerly kept in churches and monasteries.

**NECROPOLIS.** A cemetery; a city of the dead.

**NEEDLE OR NAIL.** In mining, a long taper piece of copper, or iron, with a copper point; used when stamping the hole for blasting.

**NEEDLE.** A term applied in Scotland to a horizontal timber in scaffolding.

**NEEDLE.** A temporary beam or girder used to support part of a wall while the wall beneath is being underpinned, or other operations performed necessitating the removal of the permanent supports; rolled iron joists are sometimes used as needles.

**NEEDLE.** A short piece of wood for taking the thrust at the upper end of an inclined shore; it generally runs a short distance into the wall.

**NEEDLEWORK.** A term anciently used for the framework of timber and plaster in old houses.

**NEGATIVE.** A photograph in which the lights and shades of the object are the reverse of those in nature.

**NEGATIVE BOOSTER.** See *Booster*.

**NEGATIVE ELECTRICITY.** Resinous electricity; the opposite of positive.

**NEGATIVE QUANTITY.** A minus quantity.

**NELUMBO.** The Chinese lotus.

**NEMALITE.** A fibrous hydrate of magnesia.

**NEOLITHIC.** Pertaining to the more recent division of the stone period.

**NEOZOIC.** Denoting the formations from the Trias down to the most recent.

**NEPTUNIAN THEORY.** The theory which refers the formation of all rocks and strata to the agency of water.

**NERVURES, NERVES OR BRANCHES.** Terms sometimes applied to the ribs of a vaulted roof which bind the sides of any groined apartment.

**NET, NETT.** Free from all deduction; clear of profit; a "net price" is a price clear of discount.

**NET HORSE-POWER.** Is the indicated horse-power of an engine less the horse-power which is consumed in overcoming its own resistance.

**NEUTRAL AXIS, NEUTRAL SURFACE OR NEUTRAL LAYER.** The plane which separates the part of a beam in compression from the part in tension.

**NEUTRALISATION.** The darkening or reduction in brilliancy of a colour.

**NEUTRAL TINT.** A factitious grey pigment made up of blue, red and yellow in certain proportions.

**NEWEL.** A vertical post, more or less ornamented; used in stairs, into which the strings and winders are fixed; a large final baluster, on a curtail or other step, supporting the end of the handrail.

**NEWEL.** The central column round which the steps of a circular staircase wind; when this column is dispensed with the stair is described as "open newel"; the principal post at the angles and foot of a staircase.

**NEWEL STAIRS.** Those in which the newels form a conspicuous part; same as "dog-legged stairs".

**NEWS ROOM.** A room in public libraries set apart for the reading of newspapers, etc.

**NIB or STUB.** The projection on the back of a roofing tile for hanging it on the battens.

**NICHE.** A recess formed in a wall for a statue, vase or other ornament.

**NICHE.** In carpentry, the wood-work to be lathed over for plastering.

**NICHE.** An angular niche is one formed in the corner of a building, whilst a ground niche is one which, instead of bearing on a massive base or dado, has its rise from the ground.

**NICHED.** In a niche.

**NICK.** A notch cut into a thing; to cut in nicks or notches.

**NICKEL.** A metal of a greyish-white colour.

**NICKEL GLANCE.** An ore of nickel.

**NICKEL GREEN.** A green arseniate of nickel.

**NICKELIC.** Pertaining to nickel.

**NICKEL OCHRE.** Nickel green.

**NICKEL SILVER.** A compound of copper, nickel and zinc.

**NICKING BUDDLE.** A trough at the head of another long flat trough; it is chiefly used in the process of washing ore.

**NICOLITE.** An ore of nickel mixed with arsenic.

**NIDGE.** To dress stones with a pick.

**NIELLO.** A kind of ornamental engraving chiefly used for brass and zinc plates.

**NIGGED ASHLAR or NIDGED ASHLAR.** In masonry, stone hewn with a pick or pointed hammer instead of a chisel; also called hammer dressed.

**NIGHT BOLT.** A vertical bolt which shuts by its own weight by means of a string passing over a pulley; generally fixed in a bedroom to enable any one in bed to manipulate it without getting out.

**NIGHT LATCH.** A latch which can be opened from the inside by hand and only by a key from the outside.

**NIGHTMAN.** One who empties water-closets or cesspools in the night.

**NIGHT SOIL.** The contents of water-closets.

**NIL.** A term used for cancelling in accounts or book-keeping.

**NILL.** The shining sparks of brass in melting the ore.

**NILOMETER.** An instrument for measuring the rise of water in the Nile during the state of flood.

**NIMBUS.** A disc of light round the heads of divinities, saints and sovereigns.

**NIPPERS or IRON DOGS.** A pair of steel pointed claws, the ends of which catch in holes or knobs, one in each side of a block of stone for which they are used for lifting.

**NIPPLE.** A short piece of pipe on which a male screw is cut; used for connecting wrought iron pipes.

**NITRATE.** A salt of nitric acid.

**NITRATE OF LEAD.** Crystallised nitric acid with oxide of lead.

**NITRATE OF LIME.** Nitric acid in combination with lime for a base, abounding in the mortar of old buildings.

**NITRATE OF SILVER.** Nitric acid saturated with pure silver.

**NITRIC ACID.** A compound of oxygen and nitrogen.

**NITRITE.** A salt of nitrous acid.

**NITROCALCITE.** An efflorescent silky mineral occurring in limestone caverns.

**NITROGEN.** That element which is the basis of nitric acid and the principal ingredient in atmospheric air.

**NITRO-GLYCERINE.** A highly explosive oily liquid prepared by the action of nitric and sulphuric acid on glycerine.

**NITRO-MAGNESITE.** The nitrate of magnesia, generally found on old walls and in limestone caves.

**NITRO-NAPHTHALENE.** A substance prepared by boiling naphthalin in nitric acid.

**NITRO-SULPHURIC ACID.** A mixture of one part of nitre with eight or ten of sulphuric acid.

**NITROUS ACID.** A compound of oxygen and nitrogen in the proportion of three equivalents of the former to two of the latter.

**NITROUS OXIDE.** A gas composed of one equivalent of oxygen and two of nitrogen.

**NOBLE METALS.** Gold, silver, platinum, etc.

**NODAL LINES.** Lines on the surface of an elastic body which remain at rest when the body is made to vibrate.

**NODAL POINTS.** The points in a string extended between two fixed objects which remain at rest when the string is made to vibrate.

**NODULE.** A rounded mineral mass of irregular shape; a small knot.

**NODUS.** A term formerly applied to a keystone, boss or knot.

**Nog.** A bolt or tree nail; a piece of wood shaped like a brick; used for fixing joinery to.

**NOGGIN.** A measure of a gill; the contents of such a measure.

**NOGGING.** A kind of brickwork carried up in panels between quarters; a partition of scantlings filled with bricks.

**NOGGING PIECES.** A term applied to the short horizontal pieces of timber placed between the studs of a partition.

**Nogs or NAYS.** Square pieces of wood piled on each other to support the roof of a mine.

**NOMBRIL.** The centre of an escutcheon.

**NOME.** A tract of country; a division of ancient Egypt.

**NOMENCLATURE.** The art of naming; a vocabulary or dictionary of technical language peculiar to any art or science.

**NONAGON.** A nine-sided figure or polygon with the sides at an angle of 140°.

**NON-CONDENSING ENGINES.** Those without a condenser, the steam escaping into the atmosphere after having acted upon the piston. The effect is measured by the excess of the pressure of the steam upon the piston, less the friction of the engine above the pressure of the atmosphere.

**NON-CONDUCTOR.** Any substance which does not conduct electricity, heat, etc., or through which the electric fluid passes with considerable difficulty or not at all, such as sulphur, hair, wool, glass, the air, resin, etc., but even these become electric by friction.

**NONILLION.** A million raised to the ninth power; in England with fifty ciphers annexed, in France with thirty.

**NON-METALLIC.** Not consisting of metal, or without metallic properties.

**NOOK.** A corner; a narrow place formed by an angle; an "ingle nook".

**NOOK.** A narrow place formed by an angle. See Ingle Nook.

**NORFOLK LATCH.** A common thumb latch generally fixed on batten doors.

**NORIA.** A hydraulic machine, common in Spain for raising water.

**NORMA.** A square for measuring right angles.

**NORMAL LINE.** A phrase used for a perpendicular line.

**NORMALS or RADIATING JOINTS.** The lines drawn from the centre or centres from which an arch is struck.

**NORMAN.** Pertaining to the Normans or Normandy.

**NORMAN STYLE OF ARCHITECTURE.** That from the years 1066 to 1154; characterised by round-headed doorways and windows, the aisles in

churches divided from the nave by columns of vast size, the mouldings accurate and scientific.

**NORROY.** In heraldry, the king-at-arms having jurisdiction north of the Trent.

**NORTHAMPTONSHIRE PIG IRON.** Is produced from poor ore, but is useful to mix with other ore.

**NORTHERN PINE** (*Pinus sylvestris*). Or red or yellow fir, yellow deal or red deal, is obtained from the Scotch fir tree grown in Scotland and also in the Baltic and Russia; imported from the latter places in barks, planks, deals and battens.

**NORTH OF ENGLAND IRON.** Such as Acklam, Ridsdale, Weardale, etc., are produced from ores of the carboniferous system, stronger and tougher than Scotch; used generally for forge purposes.

**NORWAY TIMBER.** Is generally of a small size, tough and durable, but often contains a good deal of sapwood.

**NORWEGIAN DEAL.** That imported from Christiania, in barks about eight or nine inches square, and also in prepared flooring and match boarding; it is of good quality but is now getting scarce.

**NORWEGIAN STANDARD DEAL.** Is 12 x 9 x 3 feet.

**NOSE.** The end of anything. See Bib Cock.

**NOSE COCK.** A cock for a gas bracket or pendent, having one end screwed for the purpose of receiving the socket for the burner; in Scotland a "bib cock".

**NOSE PIECE.** The nozzle of a hose or pipe.

**NOSING.** A general term for a projecting rounded edge, as on a step.

**NOSING.** The roll placed on the edge of a lead flat when the sides of the roof are slated.

**NOSING, BOTTLED or BOTTLE NOSED STEP.** A term applied to the front edge of a tread or step so far as it projects over the riser that supports it. A window board, etc., is said to be nosed if the front edge is rounded.

**NOSING AND SCOTIA.** In stair-casing, signifies that the former is the edge of the tread rounded, the latter being a small moulding placed under it.

**NOSING BOARD.** In staircasings, the top tread; usually about four inches wide, and resting on the trimmer.

**NOSOCOMIAL.** Relating to hospitals.

**NOTATION.** The act or practice of recording anything by marks; a system of signs, as the Roman table.

1. I.	25. xxv.
2. II.	30. xxx.
3. III.	40. xl.
4. IV.	50. l.
5. V.	60. lx.
6. VI.	70. lxx.
7. VII.	80. lxxx.
8. VIII.	90. xc.
9. IX.	100. c.
10. X.	200. cc.
11. XI.	300. ccc.
12. XII.	400. cd.
13. XIII.	500. d.
14. XIV.	600. dc.
15. XV.	700. dcc.
16. XVI.	800. dccc.
17. XVII.	900. cm.
18. XVIII.	1000. m.
19. XIX.	1500. md.
20. XX.	1898. mdccxcviii.

**NOTCH.** An indentation; a hollow cut in anything; to cut small hollows in.

**NOTCH BOARD.** The notched board which receives the ends of the steps in an open string staircase. Same as Cut String.

**NOTCHED BEAM.** A built up beam having a series of rectangular notches arranged in notched courses.

**NOTCHED COURSES.** In a built beam, are such as have rectangular notches cut into the top and bottom of each, and so arranged to lie opposite each other in order that a key (a block of hard wood) may be fitted into them to prevent them from slipping.

**NOT PAPER.** That used for water-colour drawing and general purposes.

**NOVACULITE.** A stone of which hones are made.

**NOWED.** In heraldry, tied in a knot.

**NOWEL.** The inner part of a large loam mould used in a foundry.

**NOZZLE.** The extremity of anything ; the outlet for discharging the water from an eaves gutter.

**NUCLEUS.** The central part of a body round which the rest accumulates.

**NUCLEUS.** The internal part of the flooring of the ancients, consisting of a strong cement over which was laid the pavement which was bound with mortar.

**NUDE.** An undraped figure ; bare ; naked.

**NUGGET.** A lump of metal, especially of native gold.

**NULLAH.** In India, a water-course, a natural canal, or small branch of a river.

**NUNNERY.** A Roman Catholic building for an association of nuns

or females devoted to a life of religious seclusion.

**NURSERY.** An apartment in a house for the young children ; a place or garden for rearing young plants.

**NUT.** A small block of metal or wood containing a concave or female screw ; the fastening for the end of a screw bolt.

**NUT GALL.** An excrescence of the oak.

**NUT OIL.** Is sometimes used for white paint or any of the light tints ; it is expressed from walnuts ; dries rapidly, cheap, nearly colourless, but is not durable, therefore it is only used for common work.

**NUT SCREW.** A nut wrench.

**NUT WRENCH.** An instrument for fixing or removing the nuts on bolts.

**NYMPHÆUM.** Ancient term for a grotto.

## O.

**OAK.** That known as *Quercus pedunculata* is said to be the true British oak. The oak is found in England and most of the temperate parts of Europe. English oak is considered the best, that found in Sussex being the most valuable ; it is the hardest of the species, being considerably harder than the American, called white and red Canadian oak.

**OAK.** Any tree of the genus *Quercus*, especially *Quercus robur*.

**OAK.** The silky oak (*Grevillea robusta*) is one of the most valued trees for timber purposes in North Queensland, and is spreading in many parts of the world, especially in Ceylon ; it is very hardy and drought resisting, and flourishes equally well at sea level and 6,000 feet above. The tree enjoys popularity and wide diffusion on account of its vitality, beauty of foliage and value of timber. Its favourite habitats are the scrubs that lie back from the northern coasts of Queensland. The silky oak exudes both a gum and a resin.

**OAKLING.** A young oak.

**OAK STAIN.** Consists of dissolving American potash and pearlash in water, diluted with more water for light tints.

**OAKUM.** The substance of old ropes untwisted and pulled into loose hemp ; used for caulking and stopping leaks.

**OAK VARNISH.** Consists of dissolving clear good resin in oil of turpentine ; if required to be darkened, well-ground amber or fine lampblack is added ; chiefly used for common work, dries in about ten hours. "Quick oak varnish" is made to dry in about five hours. "Hard oak varnish" is generally used for seats.

**OAST.** A term formerly applied to a kiln to dry hops or malt.

**OBELISK.** A curious relic of ancient art, consisting of a lofty pillar of a rectangular form ; generally ornamented with inscriptions, etc. ; usually of stone or granite. It has four sides which taper to a summit, where, unlike other pillars, it does not end in a flat surface or an

ornamented capital, but in a pyramidion which also has four sides which taper at an increased angle to a sharp point called the apex.

**OBELISK.** A reference or mark, thus, †.

**OBIT.** A particular length of slate.

**OBJECTIVE PLANE.** Any plane face or side of an original object to be delineated on the perspective plane.

**OBLATE.** In geometry, flattened or depressed at the poles.

**OBLATE SPHEROID.** A sphere flattened at the poles, or such a sphere as is produced by the revolution of an ellipse about its shorter axis.

**OBLIQUATION.** Declination from a straight line or course.

**OBLIQUE.** Slanting, neither perpendicular nor parallel.

**OBLIQUE ANGLE.** An angle greater or less than a right angle.

**OBLIQUE-ANGLED TRIANGLE.** One that has no right angle.

**OBLIQUE ARCHES or OBLIQUE BRIDGES.** Those constructed in an oblique direction; also called "skew arches".

**OBLIQUE DRAINS.** Agricultural drains laid obliquely to the surface slope of the land; sometimes termed "switch" drains.

**OBLIQUE LINE.** One which stands in respect to another at a greater angle than 90°.

**OBLIQUE PROJECTION.** That where a body is projected in a line, making an oblique angle with the horizontal line.

**OBLIQUE SPHERE.** A sphere in which the axis of the earth is oblique to the horizon of the place.

**OBLIQUE TENON.** The tenon required when the junction is not a right angle, as in the rails of a spandrel framing to stairs.

**OBLONG.** A rectangle of unequal dimensions, anything longer than broad.

**OBOLE.** A weight of ten or twelve grains.

**OBOLUS.** A small coin of ancient Greece, worth 1½d.; a small weight, ½ of an Attic drachma.

**OBSCURED GLASS or GROUND GLASS.** That having one side covered with an opaque film, formed by grinding the surface or by melting powdered glass upon it.

**OBSCURED SHEET.** Sheet glass obscured or frosted.

**OBSERVATORY.** A building or tower for making observations, especially on the heavenly bodies.

**OBSIDIAN.** A glass produced by volcanoes.

**OBSTRUCTION.** That which impedes progress.

**OBTUNDING.** The blunting or taking away a sharp corner or arris.

**OBTUSE.** Denoting an angle larger than a right angle; blunt, not pointed or acute.

**OBTUSE ANGLE.** An angle greater than a right angle; if less than a right angle it is called an acute angle.

**OBTUSE-ANGLED TRIANGLE.** A triangle which has an obtuse angle.

**OBTUSE-ANGULAR.** Having angles that are obtuse.

**OBTUSE SECTION OF A CONE.** The hyperbola of ancient geometers, because they considered it only such a cone whose section through the axis was an obtuse-angled triangle.

**OCCUS.** The banqueting room of a Roman house.

**OCHRACEOUS.** Of an ochre colour.

**OCHRE.** A fine clay, mostly yellow; used as a pigment, being an oxide of iron.

**OCTAGON.** In fortifications, a place with eight sides.

**OCTAGON.** In geometry, a plane figure of eight sides and eight angles.

**OCTAHEDRAL.** Having eight equal sides.

**OCTAHEDRON.** A solid contained by eight equal and equilateral triangles.

**OCTANGULAR.** Having eight angles.

**OCTANT.** The eighth part of a circle; an instrument for angular measurement attached to an arc of 45°.

**OCTASTYLE.** A building or portico with eight columns in front.

**OCTAVO.** A book in which a sheet is folded into eight leaves or sixteen pages; the size of such a book (written 8vo.).

**OCTILLION.** The number produced by involving a million to the eighth power, represented by a unit with forty-eight ciphers annexed.

**OCTODECIMO.** A book having eighteen leaves to the sheet; the size of such a book (written 18mo.).

**OCTOFID.** Separated into eight segments.

**OCTOSTYLE.** An octastyle.

**OCULI AXIS.** A term applied to the eyes or the termination of the spiral scrolls of the volutes in the Ionic capital. The canal, canalis or channel of the volutes is a deep concave groove with its lower edge bending down towards the middle, it runs across the face of the capital between the volutes and revolves about the spirals on either side, diminishing gradually in breadth until it loses itself in the eyes of the volute.

**OD.** A presumed all-pervading magnetic force.

**ODD SHOULDERED.** In joinery, when one shoulder is longer than the other to fit a moulding or rebate.

**ODEUM.** A term applied formerly to a small theatre in ancient Greece.

**ODONTOGRAPH.** An instrument constructed to measure off the teeth of wheels.

**ECUS.** According to Vitruvius, apartments near or connected with the dining-room.

**EIL-DE-BŒUF.** An oval or round window in the roof or frieze of a large building.

**EILLETS or OYLETS.** Small openings or loopholes, sometimes circular; extensively used in the fortifications of the Middle Ages.

**OFFICES.** Apartments where the domestics do their duties, as in the kitchens, sculleries, etc.; buildings about a family house; a room for clerical work.

**OFFSET.** In surveying, a perpendicular let fall from the main line to the fence or extremity of an enclosure.

**OFFSET or SET-OFF.** The splay or narrow slanting course of stone or brick serving to connect two portions of a wall, the uppermost of which recedes from the face of that beneath; the horizontal projections from the faces of the different parts of a wall where it increases in thickness; the difference in thickness is the amount of the set-off.

**OFF-SET STAFF.** An instrument used by surveyors to measure short distances.

**OGEE or O.G.** A moulding of two members, the one concave and the other convex. Same as Cyma-reversa.

**OGEE ARCH.** A pointed arch the sides of which are each formed with a double curve.

**OGEE ROOF.** That in which the lower portions are convex outward and the upper portion concave.

**OGIVAL.** Ogee-shaped.

**OGIVES.** Arches or branches of a Gothic vault, which instead of being circular, pass diagonally from one angle to another, and form a cross with the other arches which make the sides of the squares of which the ogives are the diagonals. The point of intersection or middle where the ogives cross each other is termed the key, which is sometimes carved in the form of a rose.

**OHM.** The unit of resistance represented by the resistance through which one ampère of current will flow at a pressure of one volt electromotive force.

**OHM METER.** An apparatus for measuring resistance in ohms or megohms (a megohm is equal to 1,000,000 ohms).

**OHM'S LAW.** According to the laws of resistance as laid down by Ohm, a German electrician.

**OIL.** An unctuous liquid drawn from various animal and vegetable substances. Oils are divided into two classes, *viz.*, fixed oils and volatile oils.

**OIL CUP.** A cup with a supply of oil for a journal; a lubricator.

**OIL GAS.** Inflammable gas procured from oil.

**OIL GOLD SIZE.** Consists of grind-

ing ochre in boiled linseed oil ; it is made as thick as possible and thinned down when required with boiled linseed and fat oil ; it improves with age.

**OILLETS or OYLETTS.** Small openings or eyelet holes seen in mediæval military buildings.

**OIL OF VITRIOL.** Sulphuric acid.

**OIL STONE.** A kind of hone slate.

**OIL VARNISHES.** Those made from the hardest gums such as copal, gum anime, or amber dissolved in oil ; they are the hardest and most durable of all varnishes, but require some time to dry, adapted for outside work.

**OIL WELL.** A well sunk into an oil-bearing bed.

**OKENITE.** A fibrous silicate of lime.

**OLD ENGLISH OAK** (*Quercus robur* or *Quercus pedunculata*) or **STALK FRUITED OAK** Is a British oak which is considered superior to any other ; it is of a light brown or brownish-yellow colour, with a firm, hard and glossy surface, straight grain, generally free from knots, very durable in earth or water ; it has numerous and distinct medullary rays.

**OLD RED SANDSTONE.** The Devonian formation.

**OLD RED SANDSTONE.** A series of red sandstone rocks lying below the coal formation.

**OLEMETER.** An instrument for ascertaining the purity of oil.

**OLEORESIN.** A mixture of an essential oil and a resin.

**OLIBANUM.** An inspissated sap or gum resin.

**OLIGIST.** Specular iron ore.

**OLITORY.** Belonging to a kitchen garden.

**OLIVE.** A colour of mingled violet and green.

**OLIVER.** A small tilt hammer worked by the foot.

**OMBROMETER.** A rain gauge.

**OMER.** A Hebrew measure of six pints.

**OMISSIONS.** Are works which, whilst included in the bills of quantities, have not been executed, and consequently have to be deducted.

**OMNIBUS BOX.** A large box at the opera.

**OMPHACITE.** A green variety of augite.

**ONCOME.** Scotch. Same as Income.

**ONE IN THIRTY, ONE IN FORTY,** etc. Refer to the inclination in the levels for drains, roads, etc., e.g., an inclination of one in thirty in, say, a sewer, means that in every thirty feet the sewer falls or slopes one foot from the line of horizon.

**ON WASTE.** In quantity taking, the collections and subsequent addition of allowances on measurements to obtain the proper lengths, and thence carried to dimension column.

**ONYX.** A variety of agate with various coloured layers.

**OOLITE.** The Portland stone used in building ; also called freestone and roestone ; a calcareous stone.

**OOLITIC.** Consisting of or resembling oolite.

**OOZE.** Soft mud or slime ; to percolate, as a liquid, through the pores of a substance.

**OOZE.** A stratum ; foraminiferal remains, found on ocean beds.

**OPA or OPÆ.** The bed or cavity in which the head of a tie beam rests ; the beds of the beams of a floor.

**OPAL.** An amorphous form of silica combined with water.

**OPAQUE GLAZES.** Are when the articles (such as the pans of water-closets, etc.) are dipped before burning into a slip formed of superior clay very finely worked, dried, etc., and of the required colour.

**OPE.** A contraction for "opening" ; the space left for a door or window.

**OPEN CLAMPING.** A method of burning bricks, which do not contain their own fuel, by building them into clamps and arranging them in open order the same as in a kiln, but with the fuel interspersed and the whole covered in with a temporary casing of old bricks.

**OPENINGS.** The term applied to the apertures left for the doors, windows, etc., in a building.

**OPEN JOINTS.** Is the result from projections beyond the plane of the chisel draughts in stone, thus causing the bed of the stone to be rounded, hence the open joint.

**OPEN NEWEL STAIR.** Stairs having newels arranged round an opening, or a square well hole, and having a short flight connecting the progressive and retrogressive flights.

**OPEN SLATING or HALF SLATING.** A method of slating in which there is a space between the individual slates of each course.

**OPEN STOVE.** A stove with an opening so that the fire can be seen.

**OPEN STRING or OPEN STRING STAIRS.** Are those in which the strings are cut, mitred or bracketed.

**OPEN TRACERY.** That in which the spaces between the bars are neither closed by slabs of wood, stone or glass.

**OPEN-WEBBED GIRDER.** One having its top and bottom horizontal members connected by diagonal or vertical pieces; same as a braced girder.

**OPEN WORK.** Ornamental work with open spaces in its substance.

**OPERA HOUSE.** A theatre for the representation of operas.

**OPERAMETER.** An instrument for determining the number of revolutions made by a wheel, etc.

**OPERATIVE.** A skilled workman; an artisan.

**OPERCULAR or LIDDED DRAIN PIPES.** Are those having the upper portion detachable for inspection.

**OPHIOLITE.** A mixture of serpentine with limestone.

**OPHITE.** Green porphyry.

**OPINICUS.** In heraldry, an imaginary animal with the head and wings of a griffin, the tail of a camel, and the body of a lion.

**OPISTHODOMOS.** The enclosed space behind a temple; the treasury at Athens; so called because it stood behind the temple of Minerva; same as the Roman posticum.

**OPPIDAN.** At Eton College a student not on the foundation, and who boards in the town.

**OPPIDUM.** An entrance to a town; a mass of buildings; the façade to a public building.

**OPPOSITE ANGLES.** Those formed by two straight lines crossing each other, but not two adjacent angles.

**OPPOSITE CONES.** Those in which a straight line can be everywhere applied on the surface of both the cones.

**OPPOSITE SECTIONS.** Those made by a plane cutting two opposite cones or other solid bodies.

**OPTIC PYRAMID.** In perspective, that formed by the optic rays to every point of an object.

**OPTIC RAYS.** Those which diverge from the eye to every part of an original object.

**OPTICS.** The science of the properties of light and vision.

**OPTIGRAPH.** A form of camera for copying landscapes.

**OPTOSTROTUM.** A Greek term for a brick-paved flooring.

**OPUS.** Roman reticulated masonry; a mode of workmanship.

**OPUS ALEXANDRINUM.** The mosaic work used for floors in Byzantine and Romanesque churches.

**OR.** In heraldry, gold, denoted by dots in engravings.

**ORA.** A Roman hawser.

**ORANGE OCHRE or SPANISH OCHRE.** Is a bright yellow ochre burnt to give it warmth of tint; very durable, dries and works well in oil or water.

**ORANGE RED.** A pigment produced by a further oxidation than is required for red lead, though a brighter and far better pigment.

**ORANGERY.** A gallery or building in a garden or parterre opposite to the south.

**ORATORY.** A small private chapel or closet for devotion.

**ORB.** In heraldry, a mound.

**ORB.** A mediæval term for a blind window.

**ORB.** A knot of foliage or flowers placed at the intersection of the ribs of a Gothic ceiling or vault to conceal the mitres of the ribs; in Gothic ornament, bosses, knots of foliage, flowers or other ornament in cornices.

**ORBICULUS.** A term applied by Vitruvius to a pulley having a groove in its circumference for a rope or chain to fit into; used as a mechanical power for raising.

**ORCHARD HOUSE.** A glass house for fruit trees.

**ORCHESTRA.** The part of a theatre or other public place appropriated to the musicians; the area in the Greek theatre comprised between the lower range of seats and the proscenium, and being the scene of action of the dancers. In the Roman theatre the orchestra was appropriated to the senators.

**ORDER.** An assemblage of parts consisting of a base, shaft, capital, architrave, frieze and cornice, the whole constituting the entablature. Orders of architecture are usually termed the "Five Orders," without reference to other styles. They are enumerated by most writers as: 1. Tuscan, 2. Doric, 3. Ionic, 4. Corinthian, 5. Composite.

**ORDER.** In heraldry, a body of persons associated together by the possession of a common honorary distinction.

**ORDER OF THE HOLY GHOST.** In heraldry, the chief military order of France before the Revolution.

**ORDINARY.** In heraldry, an addition to a coat of arms.

**ORDINARY BRICKS.** Those of a fair quality and intended to be used without cutting, the best being selected for fronts, and are then called facing bricks.

**ORDINATE.** A straight line in a curve terminated by its sides and bisected by the axis.

**ORDNANCE DATUM.** An imaginary horizontal plane extending over the whole country at the same height as the mean sea level at Liverpool. This was fixed by the surveyors of the Ordnance Department, and the levels of districts are marked on the ordnance maps as being so many feet above the "ordnance datum," or above the mean sea level at Liverpool.

**ORDNANCE SURVEY.** A survey of Great Britain and Ireland at the instance of Government. Originated

in the mutual desire on the part of English and French philosophers to determine the precise difference of longitude between the meridians of the Greenwich and Paris observatories.

**ORDONNANCE.** The perfect arrangement and composition of any architectural work.

**ORE.** Metal in a natural state combined with other substances.

**OREGON PINE or DOUGLAS PINE** (*Abies Douglasii*). Is found in N.W. America; it is slightly harder and similar in appearance to Canadian red pine.

**ORGANICAL DESCRIPTION OF A CURVE.** The method of describing a curve upon a plane by continued motion.

**ORGANIC REMAINS.** Fossil remains.

**ORGAN LOFT.** The place in a church or cathedral for the reception of the organ, or a small room or gallery over it.

**ORGAN SCREEN.** An ornamental stone wall or piece of timber framework on which a church organ is placed, and which in English cathedrals and churches forms usually the western termination of the choir.

**ORGUES.** Timbers shod with iron.

**ORIEL.** A recess within a room; a projecting window divided into different bays; an oriel window.

**ORIEL WINDOW.** An overhanging bay or bow window on an upper floor.

**ORIENTAL.** Situated or pertaining to the East.

**ORIENTATION.** The deviation of a church from due east; the disposition of a building with respect to the points of the compass.

**ORIFLAMB.** In heraldry, the ancient royal banner of France.

**ORIGINAL LINE, PLANE or POINT.** In perspective, a line, plane or point; referred to the object itself.

**ORILLON.** In fortifications, a rounding of earth, faced with a wall, raised on the shoulder of bastions.

**ORLE.** In heraldry, an ordinary in the form of a fillet.

**ORLE.** A fillet under the ovolo or quarter round of a capital; it is called a cincture when it is at the top or bottom of the shaft of a column; a French term for fillet.

**ORMOLU.** Brass, sometimes gilt, of a composition to imitate gold.

**ORNAMENTAL FRETWORK.** In lead glazing, applies to designs where flowers, etc., are introduced.

**OROGRAPHY.** The science which treats of mountains and mountain systems.

**ORPIMENT.** Yellow sulphuret of arsenic; used as a pigment.

**ORPIN.** A yellow colour.

**ORRIS.** Gold or silver lace.

**ORSEDEW.** Dutch metal.

**ORSEDEW.** Mannheim or Dutch gold.

**ORTHOCLASE.** Potash felspar.

**ORTHOGON.** A rectangular figure.

**ORTHOGRAPHY.** In geometry, is the art of representing the plan, side and elevation of the principal parts of any object.

**ORTHOGRAPHY.** In architecture, the elevation of a building, showing all the parts thereof in their true proportions. External orthography is the delineation of the outer face or front of a building, whilst internal orthography is a section of the same. The term "orthography" was used by Vitruvius in the same sense as elevation.

**ORTHOSTYLE.** Any straight range of columns.

**ORTHOTYPOUS.** Having a perpendicular cleavage.

**OSCILLATION.** Vibration.

**OSULATE.** In geometry, to touch, as a tangent, etc.

**OSCULATION.** The contact between any given curve and its osculatory circle, *i.e.*, a circle of the same curvature with the given circle.

**OSCULATORY CURVE or OSCULATING CURVE.** That circle the radius of whose curve at any particular point of another curve is of the same length as that of the curve in question at that particular point.

**OSMIUM.** A tetrad metallic element occurring in platinum ore.

**OSSUARY.** A charnel house.

**OSTEOCOLLA.** An inferior kind of glue made from bones.

**OSTEOLEPIS.** A fossil ganoid fish in the old red sandstone.

**OSTIUM.** An inner door; the door of a chamber.

**OTTOMAN.** A stuffed seat without a back.

**OUT AND OUT, or OUT TO OUT.** The utmost dimension of a building, body, figure, etc.

**OUTBOND or OUTBAND.** A term applied in Scotland to a stretcher in masonry.

**OUT BUILDING.** An outhouse.

**OUT CROP.** The coming up of a stratum to the surface of the ground.

**OUTER DOORS.** Those common to both the exterior and interior sides of a building; sometimes called "storm doors".

**OUTER PLATE.** The wall plate in a double plated roof which lies nearest the outer surface of the wall.

**OUTER STRING.** The string of a staircase on the side away from the wall.

**OUTFALL.** A fall of water; place of discharge. Same as Outlet.

**OUTGATE.** A passage out.

**OUTHOUSE.** A small house or shed at a little distance from the main one.

**OUTLET.** Passage outward; the place of egress. Same as Nozzle.

**OUTLINE.** The line by which a figure is defined.

**OUT OF WINDING.** Signifies that a surface is a perfect plane, level or true.

**OUT PARISH.** An outlying parish.

**OUTSIDE LINING.** The casing of a cased sash frame nearest to the reveal.

**OUTSIDE STRING.** In staircasing, the string not placed against the wall.

**OUTWARD ANGLE.** The same as salient angle.

**OUTWORK.** In fortifications, a work constructed beyond the main body of the place.

**OVA.** In architecture, ornaments in the form of eggs, carved on the

contour of the ovolo, or quarter round, and separated from each other by anchors and arrow heads.

**OVAL.** Elliptical; of an egg-like shape.

**OVEN.** A place arched over with brick or stone work for baking, heating, etc.

**OVER ARCH.** To form an arch over.

**OVERBRACED.** A truss or girder having more braces than are necessary.

**OVERCLOAK.** The edge of the sheet of lead dressed over the outside of a seam roll.

**OVERFLOW PIPE.** A pipe in a bath, etc., to carry off the water when it reaches a certain height, which would otherwise overflow and cause damage.

**OVERDOORS.** A form of pediment placed on the architrave across the door head for ornamentation.

**OVERGRAINED.** Consists of a glaze of colour, as dark as required, laid over the comb work in shades thrown across the work, or to imitate the felt or silver grain seen in oak.

**OVERHAND WORK.** Consists of bricks, or stones, or painting done at too great a height to insure good workmanship, the result of the scaffold being too low.

**OVERISTORY.** Same as Overstory or Clerestory.

**OVERMANTEL.** A piece of furniture, generally having panels of looking-glass, etc., placed over a mantelpiece.

**OVERSAILING COURSE.** A projecting course of bricks.

**OVERSHOT WHEEL.** A wheel turned by water which shoots over or flows on the top of it.

**OVERSTORY.** The clear, clerestory or upper storey of a building.

**OVERT.** In heraldry, spread open as wings.

**OVERTIME.** Time worked beyond the regular hours.

**OVOID, OVOIDAL.** Egg-shaped.

**OVOLO.** A convex moulding, usually a quadrant of a circle, or of an ellipse in section. The Roman ovolo is an exact quarter of a circle,

whilst the Grecian is more flat and quirked at the top.

**OVUM.** An egg-shaped ornament carved on the contour of the ovolo. Same as Ova.

**OXIDATE.** To convert into an oxide; to be converted into an oxide.

**OXIDATION.** Rusting; the process of converting metals and other substances into oxides by combining a certain portion of oxygen with them.

**OXIDE.** A compound of oxygen and a base.

**OXIDE OF IRON.** Is produced from a brown hæmatite ore found at Torbay, in Devonshire, and other places; it forms the basis of a large class of paints.

**OXIDE OF ZINC.** Is prepared by distilling metallic zinc in retorts, under a current of air; the metal is volatilised and white oxide is condensed; it is filled into canvas bags to increase its density; it forms the basis of ordinary zinc paint.

**OXFORD OCHRE.** A pigment of a warm yellow colour, soft texture, absorbent of both oil and water.

**OX STALL.** A stall for an ox.

**OXTER PIECE.** A term applied in Scotland to an "ashlar" or short quarter inserted between the floor and rafter in a garret.

**OXYGEN.** A colourless, inodorous, tasteless gas, constituting one-fifth of the atmosphere, and the supporter of life and ordinary combustion.

**OXYGON.** A triangle with three acute angles.

**OXYGONAL.** Having acute angles.

**OXYHYDROGEN BLOWPIPE.** A blowpipe in which oxygen and hydrogen are burned together to produce intense heat.

**OZONE.** A modification of oxygen, nearly always present in the atmosphere, apparently as the result of electrical action.

**OZONOMETER.** An instrument for ascertaining the amount of ozone in the atmosphere.

**0.25 CARBON STEEL.** Steel containing 0.25 per cent. by weight of carbon.

## P.

**P TRAP.** A lead trap shaped like a P.

**PACE.** A raised space about a tomb or altar ; also applied to a broad step, or a raised portion of a floor.

**PACKING.** Large stones, bricks, etc. ; used for packing, in building thick walls, or in masses of concrete, for economy ; any material used for packing, or filling up vacant spaces or interstices.

**PAD.** A piece of felt or lead put underneath the end of an iron girder for it to rest on.

**PAD.** A piece of thin wood built into mortar joints to nail woodwork to.

**PADDOCK.** A small enclosure of grass land near a stable.

**PADELLE or PADELLA.** A small cup-like vessel ; used in illuminations, filled with grease of some kind and provided with a wick.

**PADLOCK.** A lock hung on a staple and held by a link.

**PAD SAW.** A small narrow saw, which slides up into its handle when not in use ; used by joiners for cutting small holes, as key holes, etc. ; also called "key hole saw".

**PAGODA.** A name applied by Europeans to Hindoo temples, which are square stone buildings, not very lofty, crowned with a cupola. The pagodas of China are lofty structures, sometimes rising to the height of nine storeys of more than twenty feet each.

**PAGODA STONE.** A limestone with pagoda-like fossil shells.

**PAGODITE.** A mineral which the Chinese cut into images, etc.

**PAINT.** A mixture of various pigments and oil ; used for covering exposed surfaces ; to cover or be-smear with colour.

**PAINTER.** The workman whose occupation is to apply paint, etc.

**PAINTER'S COLIC.** A peculiar disease to which painters are subject.

**PAINTER STAINER.** A painter of coats of arms.

**PAINTING.** The act or employment of laying on colours.

**PAIR.** Two things of a kind, similar in form, suited to each other and used together, as a pair of doors, etc.

**PAIR OF STAIRS.** Two flights of stairs when used to connect one floor to another.

**PALACE.** A house in which an emperor, king, or other distinguished person resides.

**PALÆONTOLOGY.** The science which deals with fossil remains.

**PALÆOZOIC.** Noting the lowest fossiliferous strata and the earliest forms of life.

**PALASTRA.** A building appropriated to gymnastic sports.

**PALE.** In heraldry, the third and middle part of the escutcheon.

**PALE.** A narrow board or small pointed stake or piece of wood ; used for making fences, etc.

**PALE AMBER VARNISH.** Consists of pouring hot clarified oil on very pale transparent amber, boiled till strongly stringy, and mixed with turpentine ; it is the most durable of all varnishes, hard, works well, dries very slowly, expensive, improves other copal varnishes when mixed with them.

**PALE FENCE or PALE FENCING.** That constructed with pales, which are generally thin oak boards placed upright and slightly overlapping each other and secured by nails to the rails.

**PALE LEAF GOLD.** Consists of an alloy of silver and gold beaten into leaf.

**PALEOGEAN.** Pertaining to the earth's superficial condition formerly.

**PALEOLITHIC.** Belonging to the earlier stone period.

**PALEOZOIC.** A term applied to the lowest fossiliferous strata, and also to the earliest forms of life.

**PALETTE.** A thin oval board or plate for rubbing up or holding colours.

**PALETTE KNIFE.** A knife with a broad blade and blunt edges ; used by painters for mixing paint.

**PALIFICATION.** Stake driving.

**PALIFICATION.** Formerly, the driving of piles.

**PALING.** A fence formed with pales.

**PALISADE.** A batten pointed at the top and placed upright; a fence of pales or stakes driven into the ground.

**PALISADE FENCE.** A fence formed of palisades placed a small distance apart; an upright bar in an iron railing or fence.

**PALISANDER.** A term applied on the continent to rosewood.

**PALL.** In heraldry, a cross representing the pallium or archiepiscopal ornament sent from Rome to metropolitans.

**PALLADIAN.** Pertaining to the classic styles of architecture founded on the works of Pallido.

**PALLADIAN.** A phase of fully developed Renaissance architecture introduced by the architect Palladio and largely followed in England as well as Italy.

**PALLADIUM.** A greyish metal found with platinum and gold, but in small quantity.

**PALLAS.** The Greek goddess of wisdom.

**PALLET.** A name for several tools used in pottery, gilding, etc.; a palette.

**PALLET.** A piece of wood upon which raw bricks are placed for the purpose of removing them to the "hacking" ground.

**PALLET.** A "fixing fillet".

**PALLETTE BRICKS.** Those rebated or dovetailed on their edges so as to hold a fillet securely to the wall.

**PALM.** A lineal measure of three or four inches.

**PALMETTE.** A common ornament resembling the flower of the palm.

**PALM HOUSE.** A house for tropical plants.

**PALSGRAVE.** In heraldry, a count or earl who has the overseeing of a palace.

**PALY.** In heraldry, divided by pales into four or more equal parts.

**PAMPRE.** An ornament composed of vine leaves and bunches of grapes.

**PAN.** A compartment in the framing of half timbered work.

**PANCARPI.** Garlands and festoons of fruit, flowers and leaves, for the ornament of doors, altars, vestibules, etc.

**PAN CLOSET.** Consists of a porcelain hopper basin under which a copper pan is hinged in such a way that it fits under the hopper forming a sort of trap. This pan, when the closet is flushed, swings down into a container, and its contents are emptied into the soil pipe.

**PANDANUS.** The screw pine.

**PANDATION.** In architecture, a yielding or bending in the middle.

**PANDORA.** According to Hesiod the name of the first woman, formed of clay by Vulcan, and on whom all the dieties bestowed gifts at the request of Jupiter.

**PANDORA'S BOX.** A box containing all human ills and blessings, which Pandora brought with her from heaven.

**PANE.** A square of glass; a piece in variegated work; formerly applied to various parts of buildings, such as the sides of a spire, turret, etc.

**PANEL.** In joinery, a piece of wood, usually not less than one-fourth or more than three-fourths of an inch in thickness, and the required width and length; they are fitted in the opening formed by framing, as in a door, etc.

**PANEL.** In masonry, is one of the faces of a hewn stone.

**PANEL.** A sunken compartment in ceilings, enclosed within a raised margin.

**PANEL.** In mining, a heap of ore dressed and ready for sale.

**PANEL SAW.** A kind of small hand saw with about six teeth to the inch; used by joiners for light work.

**PANELLED DOOR.** A door composed of framework filled in with panels.

**PANELLING.** Sunken compartments, such as in wainscoting, ceilings, dadoing to walls, etc. In stone, the abundant use in panelling on the insides and outsides of walls, sometimes entirely covering them, is a feature of the perpendicular style of architecture.

**PAN-HEAD RIVET.** One having a flat head with the arris taken off or slightly rounded.

**PANNIER.** The same as Corbel.

**PANTAMETER.** A graduated bevel.

**PANTHEON.** A temple dedicated to all the gods; one of the most celebrated edifices of Rome.

**PANTILES.** Sometimes called "Flemish tiles," are made from material similar as used for ordinary bricks; they are moulded flat and afterwards bent concave with a slight convexity for hooking over the adjoining tile; a gutter tile.

**PANTOGRAPH.** An instrument for copying, reducing or enlarging plans, etc.

**PANTOMETER.** An instrument for measuring elevations, etc.

**PANTRY.** A small closet in which provisions, etc., are kept; a cupboard.

**PAP.** In Scotland, a nozzle for an eaves gutter.

**PAPAL CROSS.** One whose arms are triple, thus, 卐.

**PAPER HANGINGS.** Paper ornamented with coloured figures pasted against the walls of apartments, etc.

**PAPER STAINER.** One who stains, colours or stamps paper for hangings.

**PAPER VARNISH.** Consists of dammar dissolved in turpentine with moderate agitation or gentle heat.

**PAPHIAN.** Pertaining to Paphos, a city of Cyprus sacred to Venus.

**PAPIER-MÂCHÉ.** Consists of paper boiled down, and mixed with size and pressed into moulds.

**PARABOLA.** A conic section formed by cutting a cone by a plane parallel to its side.

**PARABOLIC.** Pertaining to or in the form of a parabola.

**PARABOLIC ASSYMPTOTE.** In geometry, a line continually approaching the curve, but which though indefinitely produced will never meet it.

**PARABOLIC CURVE.** The curved boundary of a parabola, and terminating its area, except at the double ordinate.

**PARABOLIC PYRAMOID.** A solid generated by supposing all the squares of the ordinates applicable to the parabola so placed that the axis shall pass through all their centres at right angles, in which case the aggregate of the planes will form the solid called the parabolic pyramidoid, the solidity of which is equal to the product of the basis and half the altitude.

**PARABOLIC SPINDLE.** The solid generated by the rotation of a parabola about any double ordinate.

**PARABOLIC SPIRAL** or **HELICOID.** A curve arising from the supposition of the axis of the common parabola bent into the periphery of a circle, the ordinates being portions of the radii next the circumferences.

**PARABOLIFORM.** Resembling a parabola.

**PARABOLOID.** A solid generated by the revolution of a parabola about its axis.

**PARABOLOID** or **PARABOLIC CONOID.** A solid generated by the revolution of a parabola on its axis.

**PARACENTRIC.** Deviating from circularity.

**PARADISE.** A term formerly applied to a private apartment; a study, or the private appurtenances to a convent.

**PARADROMIDES.** Hypæthral walks attached to the Greek palæstra. The Romans called these walls xysta, whereas the xysta of the Greeks were covered porticoes, in which the athletæ exercised in winter.

**PARAFFIN.** A tasteless, inodorous, fatty matter, derived from the distillation of wood, bituminous coal, shale, etc.; so called as resisting the action of the strongest acids and alkalies.

**PARAFFIN OIL.** Oil distilled from shale.

**PARALLAX.** Apparent change in the position of an object, due to change in the position of the observer.

**PARALLEL.** Lines, surfaces, etc., that are in any and every part equidistant from each other.

**PARALLEL.** In electricity, two or more wires connected to the same terminals (see Terminal) of a generator in action will have exactly the same potential difference or voltage, but their several currents will be proportional to the resistances. These wires are in "parallel".

**PARALLEL COPING.** That of equal thickness throughout; generally used on inclined surfaces, as on gables, etc.

**PARALLEL GUTTER.** A trough-gutter.

**PARALLEL MOTION.** A device for making the piston and pump rods of a steam engine move in straight lines.

**PARALLELOGRAM.** A right-lined quadrilateral figure whose opposite sides are parallel; popularly, when such a figure is longer than it is broad.

**PARALLELOGRAM OF FORCES.** A phrase denoting the composition of forces, or the finding a single force that shall be equivalent to two or more given forces when acting in given directions.

**PARALLELOPIPED.** An oblong solid bounded by six parallelograms, of which the opposite pairs are equal and parallel.

**PARALLEL RULER.** A mathematical instrument formed of two equal rulers, movable about joints, but always remaining parallel.

**PARALLELS.** Trenches in front of a fortified place, parallel to the defences.

**PARALLELS OF LATITUDE.** Circles on the terrestrial sphere parallel to the equator.

**PARA MAGNET.** Paramagnetic bodies offer very little resistance to the magnetic flow. Iron is the best paramagnetic.

**PARAMENT.** The furniture, ornaments and hangings of an apartment for a room of state.

**PARAMETER.** The focal cord at right angles to the axis in each of the three conic sections; the constant quantity which enters into the equation of a curve; also called "*latus rectum*".

**PARAPET.** A breastwork or low

wall used to protect the gutters, roofs, etc., of houses, churches and other buildings; it usually has a balustrade on top; a wall breast high.

**PARASANG.** A Persian measure of length, about four English miles.

**PARASCENIUM.** In ancient theatres, a place behind the scenes used as a dressing-room.

**PARASTATÆ.** Square columns, or antæ; the Greek term for pilaster; also called "parastacles" and "parastalices".

**PARASTATÆ.** According to Vitruvius, square posts placed behind the columns of the basilica for the support of the floors of the upper porticoes.

**PARATONNERRE.** A French term applied to a lightning rod.

**PARCEL.** A term used by timber merchants to denote a consignment of timber, or a small quantity, as after a cargo has been divided into lots.

**PARCHMENT SIZE.** Consists of dissolving shreds of fine parchment in warm water; chiefly used by gilders.

**PARCLOSE OR PERCLOSE.** A screen or railing to protect a tomb, or to separate a chapel from the main body of a church; also applied to the front of a gallery.

**PARGASITE.** A variety of hornblende.

**PARGE OF PARGET.** Rough plaster made of lime and cow-dung; used for lining chimney flues.

**PARGET.** To plaster over, as a wall.

**PARGETER.** A plasterer.

**PARGETING.** A term formerly applied to decorated plaster work, now almost exclusively applied to the method of rendering the inside of chimneys with cow dung and lime.

**PARIAN.** A fine kind of clay used for statuettes; pertaining to the Isle of Paros, famous for its marble.

**PARIAN CEMENT.** A cement manufactured by recalcining plaster of Paris with different substances; chiefly used for interior work.

**PARIES.** The walls of a Grecian house in contradistinction to the wall of a city, etc.; also applied to a small enclosure, as a courtyard, etc.

**PARIETAL.** Pertaining to a wall.

**PARING CHISEL.** A long bevelled chisel; used for superior work by joiners, by merely the pressure of the hand.

**PARISH.** A district having officers of its own and supporting its own poor.

**PARK.** An enclosure round a mansion; a large piece of ground enclosed for public or private recreation.

**PARK FENCING.** That composed of oak pales placed vertically and overlapping each other; sometimes called "park oak fencing".

**PARK RAILING.** A railing or fencing composed of iron; usually made very high, for enclosing parks.

**PARLIAMENT HINGES.** Are projecting hinges used chiefly on outside shutters to allow of their swinging clear of the reveals; also called "projecting butts".

**PARLOUR.** A term generally applied to the front room on the ground floor of a house.

**PARLOUR HOUSES.** A term applied in some districts to houses having a front sitting room or parlour.

**PARODOS.** The grand entrance of the scene of an ancient theatre; that conducted on to the stage and orchestra.

**PARPEND.** A parpend wall is one, such as a parapet, composed entirely of through stones and fair on both sides.

**PARPING ASHLAR.** A term sometimes applied to ashlar thick enough to reach entirely through a wall and show a fair face on both sides; called also "perpent ashlar".

**PARPOINTING.** A term applied in Lancashire to ashlar masonry set in courses from four to six inches deep, rock faced, but with centre portion of each stone projecting beyond the joint.

**PARPOINTS.** A term applied in Yorkshire to the cuttings made in squaring up flags and landings; the

cuttings are made into "blockers," "parpoints" or "shodders," and are used for facing walls, etc. They are sometimes cut to the proper size and used for inside partitions, similar to bricks.

**PARQUET FLOOR.** A floor formed of parquetry, usually to a pattern or design.

**PARQUET, PARQUETTE.** The floor of a theatre between the orchestra and pit; parquetry.

**PARQUETRY.** A method of forming mosaic work in wood for flooring.

**PARROT COAL.** Anthracite.

**PARSONAGE.** The residence of the incumbent of a parish; a vicarage.

**PART.** A member; a division; a portion, piece or fragment; ingredient.

**PARTERRE.** A system of flower beds with intervening spaces to walk on.

**PARTHENON.** The temple of Minerva, the virgin goddess, at Athens.

**PARTIAL EARTH.** In electricity, takes place when the contact to earth is not complete or is of fairly high resistance, as when the insulation is only partly broken through.

**PARTIAL SHORT.** In electricity, a "partial short" takes place when the contact is bad or the resistance of the conductor in question be high, so that only "part" of the current is diverted from its normal circuit.

**PARTING BEAD.** The bead, in a sash frame, which separates the two sashes; called a baton in Scotland.

**PARTING SAND.** Is fine pounded, soft, dry, brick dust tied up in a piece of rag or canvas bag; used in lead casting, etc.

**PARTING SLIP or PARTING LATH.** The lath or slip of wood in the boxing of a sash frame to keep the weights apart; called a "midfeather" in Scotland.

**PARTITION.** A method of timbering for dividing one room from another; self-supporting trussed partitions are arranged so as to transmit the whole of the weight direct to the walls.

**PARTITION.** A wall of stone, brick or timber dividing one room from another.

**PARTNER.** One who shares with another, especially in business.

**PARTNERSHIP.** The state of being a partner; joint interest for carrying on a business.

**PARTRIDGE WOOD.** A variegated wood used for cabinet-making; imported from Brazil and the West Indies in large planks or round or square logs.

**PARTY COLOURED.** Of divers colours.

**PARTY COLOURS.** In painting, when two colours are used on the same surface.

**PARTY FENCE WALL.** A wall separating the vacant ground in one occupation from that in another.

**PARTY WALL.** A common wall separating two adjoining houses. Half the thickness of a "party wall" belongs to the adjoining owner.

**PARVISE OR PARVIS.** A porch, portico or large entrance to a church; an open area before the entrance of a church.

**PARVISE TURRET.** The small tower which encloses the staircase to a parvise.

**PASCHAL.** A stand or candlestick of large size; used in Roman Catholic churches.

**PASS.** A key is said to "pass" when it will turn in a lock; this term is also applied when one key will open a set of locks, when it is known as a "pass key".

**PASSAGE.** A small hall; a corridor; an entrance or exit.

**PASSANT.** In heraldry, walking.

**PASSE-PARTOUT.** A light frame, especially one to go round a picture.

**PASS KEY.** A key for opening a set of locks; a key to open a latch lock.

**PASSING BELL.** A bell tolled at the hour of a person's death to obtain prayers on his behalf.

**PASTEL.** A coloured crayon.

**PATAND.** The bottom plate or sill of a partition or screen.

**PATE.** In fortifications, a kind of platform.

**PATEE.** Said of a cross expanding towards the ends.

**PATEE, PATTEE.** In heraldry, spreading out at the extremity (chiefly of crosses).

**PATEN.** In ecclesiastical furniture, a plate or vessel on which the consecrated bread in the Eucharist is placed.

**PATENT.** A privilege granted by letters patent to inventors, as a title of an exclusive right to or property in their invention.

**PATENT AXED STONE.** Is produced with a hammer or axe, the faces of which are formed of a number of parallel thin steel blades bound together so as to permit them being taken out and resharpened. "Patent axed" is the finest description of surface work before polishing.

**PATENT DIAMOND ROUGH PLATE GLASS.** Has one side smooth but slightly wavy; the other side has a raised, oblique, lozenge shape pattern filled in with narrow ridge lines.

**PATENT GREEN.** Is a pigment produced from copper, etc.

**PATENT KNOTTING.** Chiefly consists of shellac dissolved in naphtha.

**PATENT PLATE.** A plate glass of superior quality polished on both sides.

**PATENT QUARRY ROUGH PLATE GLASS.** Is similar to the diamond rough plate, but the pattern is larger and made to imitate the quarries or small panes used in leaded quarry work.

**PATENT ROLLED CATHEDRAL GLASS.** Consists of a thin rolled plate one-eighth of an inch thick, wavy on both sides, and tinted.

**PATENT SIZE.** Is a gelatine which can be used without any soaking as required for ordinary glue size.

**PATENT YELLOW.** Is a pigment produced from oxychlorides of lead, works well in oil or water, but soon injured by the sun and impure air; also called "Turner's yellow" or "Montpellier yellow".

**PATERA.** A term applied to a great variety of flat ornaments, such

as the rosettes on the three sides of a newel, the fourth being occupied by the handrail. It was originally, in classic architecture, a circular ornament resembling a dish and often worked in relief or friezes, etc.

**PATERNOSTERS.** A kind of ornament in the form of beads, either round or oval; used in baguettes, astragals, etc.

**PATH.** A pavement; a footway; the groove in which a shutter, etc., slides; or the space in which a door opens.

**PATIN.** A term sometimes applied to a sill laid on the ground to support other vertical timbers.

**PATINA.** The green rust in proof of age on bronze coins and works of art.

**PATRIMONY.** A church estate or revenue; an ancestral estate.

**PATROOM (Dutch).** A proprietor of land with manorial privileges and right of entail.

**PATTEN.** The sole for the foundation of a wall; the base ring of a column.

**PATTEN.** The base of a column or pillar.

**PATTERN.** A mould to be copied; a piece of wood or zinc made to size or curvature required; used for marking material to the exact form required.

**PATTERN.** In foundry work, a wood representation or full-size model of the thing required to be cast; used for making an impression in the sand into which the molten metal is poured.

**PAVÉ.** In French, a pavement; pronounced *pa-vu*.

**PAVE.** The act or to lay with stone, brick, etc., so as to make a level surface.

**PAVEMENT.** The material for paving; a paved footpath or floor.

**PAVEMENT LIGHTS.** Small panes of thick glass let into a pavement to light cellars, etc., underneath.

**PAVIAGE.** A tax for paving the streets.

**PAVILION.** In heraldry, a covering in the form of a tent.

**PAVILION.** A building or part of a building with a tent-shaped roof;

this term is almost exclusively applied to a temporary structure in pleasure grounds, etc.; a "grand stand" is often called a "pavilion".

**PAVILION ROOF.** One hipped uniformly at both ends.

**PAVING.** A pavement; the act of laying.

**PAVING BRICKS.** Are generally hard or ordinary bricks, or a vitrified clay block rather larger than the ordinary brick.

**PAVING STONES.** Any stones used in the making of a pavement.

**PAVIOR.** One who lays paving stones.

**PAVIORS.** Paving bricks.

**PAWL.** An arm with one cog arranged to drop between the teeth of a ratchet and stop its motion.

**PAX.** In ecclesiastical furniture, a small plate or tablet of gold, silver or other metal, with generally the image of Christ upon the cross on it, kissed after the service, or in the celebration of the mass in Roman Catholic churches.

**PAY.** To coat with pitch or tar.

**PAY DAY.** The day on which payment of wages is due.

**PAYNISING.** A process for hardening and preserving wood; named after Payne, the inventor.

**PAY OFF.** To discharge a workman.

**PAY OFFICE.** A place where payment is made of wages.

**PEA ORE.** An argillaceous oxide of iron, consisting of round smooth grains.

**PEAR.** The swollen portion of a pneumatic tube, which, when squeezed, causes the bell to ring.

**PEAR TREE.** The wood of the pear tree, of a light brown colour; used chiefly for turning and fancy articles.

**PEA STONE.** A variety of limestone.

**PEAT.** A decayed vegetable substance resembling turf; found in boggy places and used as fuel. Many methods have been tried for the purpose of utilising peat as a marketable fuel, but all such attempts have failed to produce either an efficient substitute for coal or to

turn out peat fuel on a commercial basis, the cost of production having been excessive, or time occupied in drying and manufacturing too long, and the cost of transport and handling. All the difficulties have now been overcome by the invention of an electrical process which is not only efficient but rapid in its action, as the conversion of peat into a practicable fuel only occupies about two and a half hours. The fuel produced is very superior, having a high calorific power—about nine thousand British thermal units of heat and upwards. It is perfectly smokeless and free from clinkers.

**PEAT STONE.** An apex stone.

**PEBBLE OR PEBBLE STONE.** A roundish stone of any kind, varying in size; called a "cobble" in Scotland.

**PECK.** The fourth part of a bushel; to strike with a pickaxe.

**PEDESTAL.** The base or substructure of a column, consisting of a base next the ground, the dado or die forming the middle or main body, and the cornice or surbase at the top; the two sides of a knee hole writing table are called "pedestals"; also applied to a short pillar occurring at intervals in balustrading, etc.

**PEDESTAL CLOSET.** That consisting of a pan exposed to view, more or less ornamental, sometimes fitted with an automatic seat.

**PEDIMENT.** A term applied to any triangular ornament or structure on the top of anything. In classic architecture it is similar to a gable in Gothic architecture, etc. A pediment consists of a triangular surface with two cornices on the sloping sides and a horizontal one beneath; the enclosed space being called the tympanum.

**PEEL.** A square fortress tower on the Scottish border.

**PEG.** A small wooden pin; a small stake.

**PEGASUS.** A winged steed which sprang from the blood of Medusa, and, with a blow of its hoofs, produced the fountain Hippocrene, whence poets were fabled to draw their inspiration.

**PEGGIES.** Small-sized Lancashire slates; "best" peggies being ten inches to fourteen inches in length.

**PEGMATITE.** A variety of granite.

**PELLET MOULDING.** Same as Paternosters.

**PENATES.** The Roman gods of the store room and kitchen.

**PENCIL.** A cylinder or slip of graphite, crayon, etc.

**PENCIL.** A small brush used by painters for forming lines, etc.

**PENCILLED.** Painted, marked or drawn with a pencil; radiating.

**PENDANT.** A hanging ornament or drop; frequently used on the bottom of newels when they project below the ceiling; any similar hanging ornament; a hanging gaslight, as from a ceiling.

**PENDANT POST.** The vertical wall post in a hammer beam roof.

**PENDENT.** Hanging; overhanging.

**PENDENTIVE.** The portion of a groined ceiling or vault resting on a pier, or the corbellings resting on the internal angles of piers supporting the portion from the springing to the apex.

**PENDENTIVE BRACKETING OR CAVE BRACKETING.** That springing from the rectangular walls of an apartment, upwards to the ceiling, and forming the horizontal part of a ceiling into a circle or ellipsis; used in "coved ceilings"; also called "cove bracketing".

**PENDENTIVE CRADLING.** The timber work for sustaining the lath and plaster work in vaulted ceilings, as pendentive bracketing, etc.

**PEND STONE.** A stone suitable for building an arch.

**PENDULUM.** A contrivance consisting of a light rod or cord, lightly hung, with a heavy weight suspended from it, that if set swinging keeps regular time; an appendage to a mechanical bell which continues to vibrate for some time after the bell has ceased to sound.

**PENDULUM SLIP.** Same as Parting Slip or Parting Lath; in some places called dividing slip or lath.

**PENE HAMMERING.** Applying blows to the surface of a straight

piece of metal causing the side struck to become convex.

**PENETRALE.** The interior or most sacred part of a temple, which usually contained an altar dedicated to Jupiter Hecæus.

**PENETRALIA.** Formerly, small chapels dedicated to the Penates, in the innermost part of Roman houses. Same as Penetræle.

**PENITENTIARY.** A house of correction; a small square building in monastic establishments in which a penitent confined himself for penance.

**PENMAENMAWR STONE.** Is chiefly used for paving; splits easily; obtained from North Wales.

**PENNYWEIGHT.** A troy weight containing twenty-four grains.

**PENSION.** A French term for a boarding house or a boarding school.

**PENSTOCK.** A trough for supplying water to a mill, etc., furnished with a flood-gate.

**PENTACLE.** A figure formed by laying one equilateral triangle across another, the outline forming a six-pointed star.

**PENTADORON.** A species of brick, five palms long; used in ancient architecture.

**PENTAGON.** A plane figure having five angles.

**PENTAGON.** In fortifications, a fort with five bastions.

**PENTAGONAL.** Having five angles.

**PENTAGRAM.** A pentacle.

**PENTAGRAPH.** See Pantograph.

**PENTAHEDRAL.** Having five equal sides.

**PENTAHEDRON.** A solid figure having five equal sides.

**PENTAHEXAHEDRAL.** Exhibiting five ranges of faces, one above the other, each with six faces.

**PENTALPHA.** An isosceles triangle described on each side of a pentagon, the outline forming a five-pointed star.

**PENTANGULAR.** Having five angles or corners.

**PENTASPAS.** An engine with five pulleys.

**PENTASTYLE.** A building having five columns in front.

**PENTELIC MARBLE.** A statuary marble, similar to Parian but of finer quality; obtained from Mount Pentelicus, near Athens.

**PENTHOUSE.** A projection or hood over a door, entrance, window or flight of steps for protection from the weather; a shed standing aslope from the main building, as a "lean to".

**PENTICE.** A penthouse; a sloping roof.

**PENTILE.** A tile so formed as to cover the sloping part of a roof.

**PENTROOF.** A roof whose slope is on one side only; also applied to a roof with two equal sloping sides or pitches.

**PENUMBRA.** The partial shadow between the full light and the total shadow caused by an opaque body intercepting the light from a luminous body; the boundary of light and shade.

**PEPPERCORN RENT.** A nominal rent.

**PERERINO.** A species of volcanic rock; said to be used for the foundations of the capitol at Rome.

**PERAMBULATOR.** In surveying, a wheel or instrument for measuring distances; also called "pedometer" and "surveying wheel".

**PERBEND.** A stone extending through the thickness of a wall; also called "perpent" or "perpend".

**PER CENT.** By the hundred.

**PERCENTAGE.** An allowance per cent.

**PERCH.** A small projecting beam, bracket or corbel near the altar of a church.

**PERCH OR POLE.** A lineal measure of five and a half yards.

**PERCH OF LAND.** Contains thirty and a quarter square yards, but sometimes varies according to the district.

**PERCOLATE.** Said of water passing through the soil into a well.

**PERCOLATION.** Filtration; the act of percolating through the soil.

**PERENNIALS.** Plants which die down in winter but revive again each summer.

**PERFECT ELASTICITY.** Is when the original shape or figure is quickly and completely recovered.

**PERFLATION.** The complete and rapid changing of the air inside a building by opening doors and windows, so as to cause a forcible air stream, as distinguished from continuous and imperceptible ventilation by small openings.

**PERFORATE.** To make a hole by boring.

**PERFORATION.** A hole or aperture bored; the act of boring.

**PERFORATED BRICKS.** Those having cylindrical holes through their thickness, or they are sometimes pierced with different patterns.

**PERFORATED GLASS.** That having perforations running across the width of the pane; they are sometimes manufactured in the glass, or cut out afterwards; used for the purpose of ventilation.

**PERIBOLOS.** A court surrounding a temple; a court or enclosure with a wall; frequently ornamented with statues, etc.

**PERICLASE.** A mineral with a perfect cubic cleavage.

**PERIDODECAHEDRAL.** Noting a crystal, the primitive form of which is a four-sided prism, and the secondary form is a twelve-sided prism; called a perihexahedral when the secondary form is a six-sided prism.

**PERIDROME or PERIDROMUS.** In ancient architecture, the open space of a periphery between the columns and the walls.

**PERIMETER.** The outer boundary of a body or figure; same as circumference in a figure of circular form.

**PERIPHERY.** The circumference of a circle or ellipse. Same as Perimeter.

**PERIPOLYGONAL.** Having a great number of sides or angles.

**PERIPTERAL.** Having a range of columns all round an edifice.

**PERIPTERY.** A temple or edifice environed by a range of insulated columns; the range of columns itself.

**PERISTYLE.** A range of columns round a building or square; an enclosure with columns on three sides; same as an ecclesiastical cloister.

**PERISTYLIUM.** A continued row or series of rows of columns all round a court, building, square or cloister.

**PERITHYRIDES.** Same as Ancones.

**PERITOMOUS.** Cleaving in more than one direction parallel to the axis.

**PERMANENT HARDNESS.** When water remains hard after boiling the hardness is said to be permanent. See Temporary Hardness.

**PERMANENT SET.** The alteration of shape produced by straining or bending a piece of material beyond its elastic limit.

**PERMEABILITY.** The state of being permeable.

**PERMEABLE.** That which may be passed through by a fluid, as water through strata.

**PERMEATE.** To pass through, as water through strata.

**PERMEATION.** The act of passing through the pores or interstices, as of strata, etc.

**PERMIAN.** A term applied to the lower division of the new red sandstone rocks; so called from the conspicuous development of them in Perm, Central Russia.

**PERMISSIVE BILL.** A bill giving two-thirds of the ratepayers of a parish the right to refuse licenses for the sale of intoxicating liquor within its limits.

**PEROXIDE.** The oxide of a given base which contains the greatest quantity of oxygen.

**PEROXIDISE.** To oxidise to the utmost degree.

**PERPEND, PERBEND or PERPENT STONE.** Is usually called a bonder or bond stone; it is a large stone reaching entirely through a wall so that it shows a fair face on both sides.

**PERPEND.** In bricklaying, a vertical joint; to "keep the perpend" is to keep the vertical joints or "perpend" in a perpendicular line or plumb.

**PERPENDER.** A coping stone.

**PERPENDICULAR.** At right angles to a given horizontal line or surface ; vertical.

**PERPENDICULAR STYLE OF ARCHITECTURE.** That from the years 1399 to 1547, characterised by the upright lines of mouldings in windows and doorways, often a combination of square heads with pointed arches.

**PERPENDS.** In bricklaying, are bits of six or eight courses of bricks in height, set at the quoins or external angles and at intervals along a wall (to form gauges), carefully plumbed and levelled across from one to another, the intervening parts being then filled in. This method is used to prevent constant recourse to the plumbrule and level.

**PERPENDS.** In slating, are the joints in every alternate course which should run in a straight line from eaves to ridge, so as to "keep the perpendes".

**PERPETUAL CURATE.** Formerly, a minister in charge of a parish where there is no spiritual rector or vicar, but where the tithes are unappropriated (perpetual curates are now called vicars).

**PERPETUAL MOTION.** A motion which is renewed from itself without other intervention ; it has never been perfected.

**PERPETUAL SCREW.** A screw which works in a toothed wheel.

**PERRON.** A flight of steps leading up to the outside entrance to a principal floor ; any staircase outside of a building.

**PERSEUS.** The son of Zeus and Danaë, and the slayer of the gorgon Medusa.

**PERSIAN BLINDS.** Venetian blinds.

**PERSIAN RED.** A pigment made from chromates of lead produced by boiling white lead with a solution of bichromate of potash, the tint being produced by the employment of sulphuric acid.

**PERSIANS.** Male figures employed to support entablatures in place of columns ; when female figures are used they are termed caryatides.

**PERSIAN WHEEL.** A large wheel with buckets on the rim, for raising water.

**PERSIENNE.** The French term for a Venetian shutter.

**PERSONAL ESTATE.** Personality.

**PERSONALTY.** Movable property as distinguished from lands and houses.

**PERSPECTIVE.** The art of representing objects on a plane surface with the same effect to the eye as the presentation of the objects themselves.

**PERSPECTIVE PLANE.** One drawn according to the rules of perspective.

**PERSPECTIVE PLANE.** That interposed between the original objects and the eye of the spectator, and whereon the objects are delineated.

**PERSPECTOGRAPH.** An instrument for mechanically drawing objects in perspective.

**PERSPECTOGRAPHY.** The theory or the art of perspective.

**PERSULPHATE.** The sulphate of a metal which contains the greatest relative quantity of acid.

**PETEREBRATION.** The act of boring.

**PERTUSE or PERTUSED.** Punched ; pierced with holes.

**PERTUSION.** The act of punching or piercing ; a hole made by punching.

**PERVIOUS STRATA.** Those capable of absorbing water, *e.g.*, chalk and other limestones.

**PEST HOUSE.** A hospital for persons infected with any contagious disease, to prevent communication with others.

**PESTLE.** An implement used in braying substances in a mortar.

**PETALITE.** A mineral like quartz.

**PETASUS.** The winged cap of Mercury ; a common felt hat worn in classic times.

**PETERSBURG STANDARD.** A timber measure or standard which equals 165 cubic feet of timber ; all timber is usually brought to and sold by this standard.

**PETRÆAN.** Pertaining to rock or stone.

**PETRESCENCE.** The changing into stone.

**PETRESCENT.** Converting into stone.

**PETRIFICATION.** The process of petrifying; the state of being petrified; a body incrustated with stony matter.

**PETRIFY.** To convert into stone or a strong substance; to become stone or of a stony hardness.

**PETRIFYING SILICATE.** A liquid used as a damp-proof coating for external walls, new plaster or damp internal walls, to allow of their being painted or papered without delay.

**PETROLEUM.** A liquid bitumen exuding from rocks.

**PETROLINE.** A distillation of petroleum.

**PETROLOGY.** The study of rocks and their mineral structure.

**PETROUS.** Like stone; stony; rocky.

**PETROSILEX.** Rock flint.

**PETUNTSE.** A kind of fine clay used in the manufacture of porcelain.

**PETWORTH MARBLE.** A variety of marble found in the Weald clay at Petworth, in Sussex.

**PEW.** An enclosed seat in a church, of more or less pretension.

**PEWTER.** An alloy consisting of from four to five parts of tin to one of lead; used for covering counters, draining boards, etc.

**PEWTERER.** A smith who works in pewter.

**PHAETON.** The son of Helios and Clymene, who, having obtained permission to drive the chariot of the sun for one day, would have set the world on fire had not Jupiter transfixed him with a thunderbolt.

**PHALANGÆ.** A term applied by Vitruvius to a kind of wooden rollers; used to transport heavy masses of stone, etc., from one place to another.

**PHARMACOLITE.** Native arsenite of lime.

**PHARMACY.** A chemist's shop.

**PHAROS or PHARUS.** An ancient lighthouse; so named from a lighthouse on the island of Pharos.

**PHASE, PHASIS.** Transparent green quartz.

**PHEASANTRY.** A building or house for breeding, rearing and keeping pheasants.

**PHENOL.** Carbohic acid.

**PHÉON.** In heraldry, the barbed head of a dart.

**PHILLIPSITE.** A monoclinic silicate of alumina.

**PHILOMELA.** The daughter of Pandion, king of Athens, changed by the gods into a nightingale.

**PHILOSOPHER'S STONE.** An imaginary stone sought for by the alchemists in the belief that it transmuted the baser metals into gold.

**PHLOGISTON.** The supposed principle of inflammability; the matter of fire in composition with other bodies.

**PHŒBUS.** Apollo; the sun.

**PHŒNIX.** A fabulous female bird of Arabia, feigned to live for five or six hundred years in the desert, to immolate herself on a funeral pyre, and to rise from her ashes in renewed youth.

**PHONETICS.** The science of sounds, especially of the human voice.

**PHONICS or PHONETICS.** The science or doctrine of sounds. Same as Acoustics.

**PHONOLITE.** Clinkstone.

**PHONOSCOPE.** An instrument for translating sound vibrations into visible figures.

**PHOSGEN, PHOSGENE.** Generating light.

**PHOSPHITE.** A salt of phosphorous acid.

**PHOSPHOLITE.** An earth united with phosphoric acid.

**PHOSPHORATE.** To combine or impregnate with phosphorus.

**PHOSPHOR BRONZE.** Consists of any bronze or brass alloy mixed with a small proportion of phosphorus; used for bearings, or in positions where it is subject to shocks.

**PHOSPHORESCENCE.** To give out a phosphoric light.

**PHOSPHORESCENCE.** The property of emitting light under certain conditions; a phosphoric light.

**PHOSPHORET.** A combination of phosphorus with a base.

**PHOSPHORIC ACID.** An acid formed by combining phosphorus with oxygen.

**PHOSPHORUS.** A combustible substance of a yellowish colour, and luminous in the dark.

**PHOTOCHROMY.** The art or process of photography in colours.

**PHOTOELECTRIC.** Denoting photographs produced by the electric light.

**PHOTOENGRAVING.** Any process for producing printing blocks by photography.

**PHOTOGEN.** Any light hydrocarbon obtained by distilling coal, shale, peat, etc., and used for burning in lamps.

**PHOTOGLYPHY.** A process of photographic engraving.

**PHOTOGRAPH.** A photographic picture; to take a picture by photography.

**PHOTOGRAPHIC.** Pertaining to, obtained by, or used in photography.

**PHOTOGRAPHY.** The art of producing pictures by the action of certain sensitive substances under the influence of light.

**PHOTOGRAVURE.** Any method of producing, by photography, plates for printing in a copper-plate press.

**PHOTOLITHOGRAPH.** A picture produced.

**PHOTOLITHOGRAPHY.** A mode of producing, by photography, designs upon stones, from which impressions may be taken at a lithographic press.

**PHOTOLOGY.** The science of light.

**PHOTOMETER.** A contrivance for computing the relative intensities of light.

**PHOTOMETRIC, PHOTOMETRICAL.** Pertaining to or obtained by a photometer.

**PHOTOMETRY.** Measurement of the relative intensities of lights.

**PHOTOPHONE.** An instrument for communicating sounds by the agency of light.

**PHOTO TYPE.** A block produced by photoengraving.

**PHYLITE.** A hydrated silicate of alumina occurring in small shining scales in a clay state.

**PHYSICS.** A study of the phenomena presented by bodies.

**PIASTRE.** A coin of various values. The gold piastre of Turkey = 2'16d.; the silver piastre = 2'11d.;

the Egyptian piastre = 2'46d.; the Spanish piastre is synonymous with the dollar = about 4s.; the old Italian piastre was equivalent to about 3s. 7d.

**PIAZZA.** An open area or square; a covered walk or portico; an open square surrounded by buildings, the upper storeys of which are generally supported over an arched promenade by pillars; also applied to the colonnade itself.

**PICA.** A size of type, the standard of measurement in printing.

**PICAMAR.** An oily body, one of the products of the distillation of wood tar.

**PICK.** A sharp-pointed tool for digging, used by excavators; a pickaxe; a hammer pointed at both ends, used in dressing stone.

**PICK.** To "pick" a lock is to open it by any contrivance except the proper key.

**PICKAXE.** An axe with a sharp point at one end and a broad blade at the other; also applied to a "pick" used in excavating.

**PICKET.** A pale of a fence; a trades unionist set to watch a shop, factory, etc., during labour disputes; a sharpened stake used in fortifications.

**PICKLING.** One method consists of wrought iron being dipped in dilute acid and then washed in water; also applied to methods of preserving wood.

**PICKLOCK.** An instrument for opening locks without a key.

**PICTA.** A representation of the Virgin and the dead Christ.

**PICTURE GALLERY.** A building or apartment for the exhibition of pictures.

**PICTURE RAIL.** A small moulding round a room near the ceiling from which to suspend hooks and picture cords.

**PICUL.** A Chinese weight of 133½ lb.

**PIECE.** A roll of wallpaper which should be thirty-six feet long and twenty-one inches wide; French wallpapers are in "pieces" or rolls nine yards long and eighteen inches wide.

**PIECE WORK.** Work done by the job or piece.

**PIEDROIT.** The French term for a pier; a pilaster without a capital and base.

**PIEND.** An arris; a salient angle; a hip. (Scotch term.)

**PIEND CHECK.** The rebate formed on the piend or angle at the bottom of the riser of a stone step of a stair to catch upon the angle formed at the top of the under step. (Scotch term.)

**PIEND END.** A term applied in some parts to the gable end of a building.

**PIER.** A term applied to a stone or brick pillar, or a projection from the face of a wall for strength or to carry additional weight.

**PIER.** A pillar or mass of stone or brickwork for supporting an arch, the timbers of a bridge or other building; also applied to pillars in Norman and Gothic architecture.

**PIER GLASS.** A mirror between windows.

**PIER TABLE.** A table between windows.

**PIERRE-PERDUE.** A method of forming foundations in water, by throwing down masses of stone at random over the site of the work until the mass reaches the surface of the water, when the work is carried on in the usual way.

**PIETRA-DURA.** The finest kind of Florentine mosaic work.

**PIG.** An oblong mass of unforged iron, lead or other metal; they generally weigh about a hundred-weight.

**PIGEON HOLE.** A small compartment for papers, in a cupboard, etc.

**PIG IRON.** Rough bars of unfurified cast iron produced by the blast furnace; it is classed as grey, mottled, white or specular iron.

**PIGMENTS.** Those coloured substances which, mixed with certain vehicles, are used for painting purposes.

**PIG OF LEAD.** Is usually three feet long and weighs one and a quarter to one and a half cwt. according to the district.

**Pig's LUG.** In plumbing, a method of forming an angle by folding up the lead into a crease.

**PILÆ.** Square blocks upon the epistylia over the columns in a basilica for supporting the timbers of the roof; also applied to buttresses built against the walls of a jetty.

**PILASTER.** A square column or pillar usually set within a wall. Pilasters are also used in shop fronts, the trussets or brackets being sometimes fixed to them; also used in counter fronts, etc.

**PILE.** In electricity, a series of plates so arranged as to produce a current.

**PILE.** A large building or an edifice.

**PILE.** A square or round timber driven into the soil to increase the supporting power under a foundation.

**PILE DRIVER or ENGINE.** An engine for driving piles.

**PILE HOOP or COLLAR.** A ring of iron placed on the head of a pile to prevent splitting while being driven.

**PILE SHOE.** An iron point with side straps to allow the pile to penetrate the soil without being damaged.

**PILE WORM.** A worm found in piles.

**PILLAR.** A detached column of irregular form, deviating from the proportions of the columns of the orders; pillars are either simple or compound; usually applied in Gothic architecture.

**PILLAR CAP.** The top of a pillar usually of a more or less ornamental form; generally applied to a gate pillar.

**PILLARED.** Supported by pillars; like a pillar.

**PILLORY.** A wooden frame supported on a pillar and furnished with holes, through which the head and hands of a person were put, so as to expose him to public disgrace; abolished in 1837.

**PILLOW.** The baluster side of the Ionic capital.

**PILOT ENGINE.** A locomotive sent in advance to clear the line.

**PIMELITE.** A greasy green clay.

**PIN.** In joinery, pegs of wood used for securing a tenon in a mortise; also applied to the pegs or dovetails in a dovetailed joint.

**PIN.** Also called "trenail"; a cylindrical piece of wood; used to connect and strengthen pieces of framing at the mortise and tenon joint.

**PINACOTHECA.** A picture gallery, as the public gallery at Munich so called.

**PINASTER.** The cluster pine of the south of Europe.

**PINCERS.** An instrument with two claws for drawing out nails or gripping things which are required to be held fast.

**PINCH BAR.** An iron crowbar with the end flattened.

**PINCHBECK.** An alloy of copper and zinc in the proportion of four to one; so called from the name of the inventor.

**PINE.** A general term applied to cone-bearing trees whose timber is much used; imported from America, Norway, Riga, Memel, etc.

**PINE CHAFFER.** An insect destructive to Scotch firs.

**PINE-HAMMERED.** Surface hammering, as granite curbing.

**PINERY.** A hothouse where pine-apples are raised.

**PINETUM.** A plantation of pine trees.

**PINHOLD.** The place at which the pin holds or bites.

**PINHOLE.** The small aperture or hole for the reception of a pin.

**PINION.** A small wheel with its cogs working in those of a larger one; a spindle having several notches for the teeth of a wheel which turns it round.

**PINITE.** An amorphous hydrous silicate of alumina.

**PINK.** A light red pigment or colour; to pierce with small round holes for ornament.

**PINNACLE.** A small spire, or any structure that caps or rises above the top or roof of a building or buttress.

**PINNING UP.** In underpinning, is the act of driving the wedges

under the work, *i.e.*, wall, so as to make it bear upon the work below.

**PIN RAIL.** A hat rail.

**PINT.** The eighth part of a gallon, containing 34·659 cubic inches.

**PINTLE.** A pin or bolt; a pivot pin.

**PIONEER.** One of a body of soldiers whose duty it is to clear and repair roads, bridges, etc., for troops on the march.

**PIPE.** A wine measure usually containing two hogsheads or 105 imperial or 126 wine gallons.

**PIPE.** Any tube for the conveyance of gas, water, etc.

**PIPE CLAY.** A variety of clay used for tobacco pipes.

**PIPKIN.** A small earthen boiler.

**PISCINA.** A basin or sink within a niche near the altar in Roman Catholic churches; a water drain near the altar; also applied by the Romans to a fish pond, a shallow reservoir, etc.

**PISÉ.** Stiff earth or clay inserted into a wall.

**PISÉ WALLING.** Is composed of earth of a loamy nature with a large proportion of stones or gravel rammed down between two rows of wooden casing.

**PISOLITE.** A calcareous stone made up of pea-like globular concretions.

**PISOPHALT, PISSASPHALT.** Asphalt.

**PISSASPHALT.** Earth pitch; a variety of petroleum.

**PISSOIR.** A urinal.

**PISTAREEN.** A Spanish silver coin, value 9d.

**PISTON.** The movable solid disc fitting tightly into a hollow cylinder, and capable of being driven up or down by pressure from above or below.

**PISTON DISPLACEMENT.** Is the stroke of the piston in inches multiplied by the area of the piston in square inches; the product is the displacement in cubic inches.

**PISTON ROD.** The rod attached to the piston to communicate its motion to the crank.

**PIT.** The ground floor of a theatre; a large deep hole in the ground.

**PIT.** A greenhouse sunk in the earth to secure uniformity of temperature.

**PITCH.** A thick black substance obtained by boiling down tar; to smear, paint or pay over with pitch.

**PITCH.** A term generally applied to the inclination of a roof, stairs, etc.

**PITCH BOARD.** A small triangular piece of wood of the required size; used in staircasing for striking out the strings, etc.

**PITCH CIRCLE.** The circle of contact of a cogwheel in gear.

**PITCHED FACED MASONRY.** That in which the face of the stone is roughly dressed.

**PITCHED FACED STONES.** Those in which the arris is clearly defined by a line, beyond which the rock is cut away by the pitching chisel so as to give edges that are approximately true.

**PITCHER.** A small, rough paving stone about eight or nine inches thick.

**PITCHER.** An instrument for piercing the ground.

**PITCHING or PITCHER PAVING.** A paving made with "pitchers".

**PITCHING PIECE.** In staircasing, a horizontal timber which supports the upper ends of the carriages when there are winders.

**PITCHING PIECE.** The piece of timber fastened to the wall to take the upper ends of the rafters in a lean-to roof.

**PITCHING TOOL or CHISEL.** A mason's chisel having a bevelled instead of a cutting edge; used with the hammer for pitching or knocking off the irregularities or waste lumps on stone.

**PITCH OF A RIVET.** The distance from centre to centre.

**PITCH OF A ROOF.** The slope or inclination of its sides.

**PITCH OF A SAW.** The slope of the face of the teeth.

**PITCH OF A SCREW.** The distance it advances in making one complete turn.

**PITCH PINE** (*Pinus rigida*). Is very similar to red deal only the grain is more distinct, contains more

resin, and is much heavier. The ornamental grain is due to the annual rings. In conversion, as many boards as possible are cut tangent to the annual rings. Imported in logs averaging sixteen inches square and twenty to eighty feet long, and in planks three to five inches thick, ten to fifteen inches (or more) in width, and twenty to forty-five feet long; it is subject to heartshakes and cupshakes. Pitch pine obtained from the southern states of North America is considered the best.

**PITCH STONE.** A volcanic rock resembling indurated pitch.

**PIT COAL.** Mineral coal.

**PITH.** The soft spongy substance in the centre of a tree.

**PITMAN.** See Top Sawyer.

**PIT SAND.** That procured from a pit, and having an angular grain and a porous rough surface; it often contains clay and similar impurities.

**PIT SAW.** Is a large two-handle saw requiring two men to work it; the timber to be sawn is placed over a pit, and sawn vertically up and down by the two men, one being in the pit and the other on the top guiding the saw; the former is termed a "pitman" and the latter a "top Sawyer". A "pitman" is also called a "bottom Sawyer" in some districts.

**PITTACAL.** A blue substance with a bronze-like lustre, obtained from wood tar.

**PITTACAL.** A dark blue substance obtained from wood tar.

**PITTICITE, PITTIZITE.** Pitchy iron ore.

**PIVOT.** A small stud, pin or point on which anything turns.

**PIVOT FRAMES.** Window sashes hung on pivot frames either vertically or horizontally.

**PIVOT PIERS.** Are sometimes built hollow for economy; they are circular in form and larger on the top.

**PIX.** A little box or chest in which the consecrated host is kept in Roman Catholic churches.

**PLACE BRICKS or GRIZZLES.** Are chiefly used for filling in brick

nogged partitions; when used for exterior work they are generally rendered in cement to protect them from decay. They are bad weathering bricks, being soft, weak and underburnt owing to their coming from the outside of the kiln; they are generally reddish in colour.

**PLACER.** Any mineral deposits not classed as veins.

**PLAFOND.** Any soffit; the ceiling of a room whether flat or arched; the underside of the projection of the larmier of the cornice; the French for ceiling.

**PLAIN.** Void of ornament; smooth; level.

**PLAIN ARCHES.** In brickwork, are those in which the bricks are not cut or shaped in any way, such as in tunnels, bridges, etc.

**PLAIN FISHED JOINT.** That made by butting the ends of two pieces of timber and then placing two short pieces, called "timber fish plates," across the joint, the whole being bolted together; sometimes iron plates are used, called "fish plates," instead of the short pieces of timber.

**PLAIN GROUNDS.** Wall hangings or papers self-coloured, *i.e.*, of one colour only.

**PLAIN JAMB LININGS.** In joinery, applied to any lining that is made up of one flat board or surface.

**PLAIN LOCKS.** Have no internal arrangement whatever and can be opened by any key of the right size.

**PLAIN ROUGH ROLLED PLATE GLASS.** Has very narrow parallel ridge lines close together.

**PLAIN TILE.** A flat roofing tile about ten inches long and six inches wide.

**PLAIN WORK.** In masonry, the removal of the irregularities of the stone so as to obtain a plain face or flat or even surface; the labour itself.

**PLAIN WORK, CHISELLED OR RANDOM-TOOLED WORK.** Consists of chiselling down the inequalities left by the saw, punch or point, and leaving the chisel marks running at random all over the surface of the stone.

**PLAN.** A horizontal section supposed to be taken (in buildings) on

the level of the floor through the solid parts of the walls so as to show their various thicknesses, and situation and dimensions of the various rooms, etc.; any drawing of any projected work on paper.

**PLANARY.** Pertaining to a plane.

**PLANCEER.** The soffit of an opening or stair; the soffit of the corona of a cornice.

**PLANCH.** To cover with planks.

**PLANCHETTE.** The French term for a small board.

**PLANE.** A tool for smoothing boards; to make smooth with a plane.

**PLANE.** Any surface parallel to the horizon; any surface that coincides in every direction with a straight line.

**PLANE ANGLE.** One contained under two lines and surfaces; so termed to distinguish it from a solid angle; also spelt "plain angle".

**PLANE GEOMETRY.** The geometry of figures on a plane surface.

**PLANE OF SATURATION.** The level at which water in an underground formation naturally stands.

**PLANER.** A planing machine; one who, or that which, planes or levels.

**PLANE TABLE.** An instrument marked off into degrees from the centre; used in surveying.

**PLANE TREES.** Any species of the genus *Platanus*.

**PLANE TRIGONOMETRY.** That branch of mathematics whose object is the investigation and calculation of the sides and angles of plain triangles.

**PLANET WHEEL.** A wheel revolving round or within the circumference of the wheel by which it is driven.

**PLANIMETER.** An instrument to measure the area of a plane figure.

**PLANIMETRY.** The mensuration of plane surfaces.

**PLANING MACHINE.** A machine for truing or planing wood or metal.

**PLANISH.** To polish by hammering.

**PLANISHER.** A tool to polish or smooth brass.

**PLANISPHERE.** A sphere projected on a plane.

**PLANK.** A piece of sawn timber not less than eleven inches broad and from two to six inches thick.

**PLANO.** Signifying flat.

**PLANO-CONCAVE.** Flat on one side and concave on the other.

**PLANO-CONICAL.** Level on one side and conical on the other.

**PLANO-CONVEX.** Flat on one side and convex on the other.

**PLANO-HORIZONTAL.** Having a level horizontal surface or position.

**PLANT.** The machinery, tools, scaffolding, etc., used to carry out a piece of work.

**PLANT.** To "plant" is to lay the foundation courses of masonry.

**PLANTATIONS.** Slates  $13 \times 10$  inches; they are sold by the thousand of twelve hundred.

**PLANTED OR LAID IN MOULDINGS.** Those made of separate pieces of stuff and fixed on to the woodwork to be ornamented.

**PLANTED ON.** In joinery, a term applied to any separate piece of stuff "planted on" or fixed to another.

**PLAQUE.** A flat plate upon which enamels, etc., are painted; the enamel itself; any similar decorative plate.

**PLASH.** A branch partly lopped and bound to others; to interweave branches.

**PLASHING.** The dashing of colouring matter on walls in imitation of granite, etc.

**PLASHING.** Cutting branches half through and interweaving them with others to form a hedge.

**PLASM.** A mould or matrix in which anything is cast or formed.

**PLASMA.** A variety of quartz or chalcedony.

**PLASTER.** A composition of lime, water and sand; used to finish off the walls of a room.

**PLASTERER.** The operator whose work consists of covering walls, ceilings, brick or wood partitions, etc., with cements, limes and plaster; he also prepares or runs the mouldings, string courses, cornices and enrichments that appear in relief on the exterior and interior of a building, when they are of the above materials.

**PLASTERING.** Laying the first coat on a lathed partition or ceiling; a covering of plaster.

**PLASTER OF PARIS.** Consists of calcined gypsum.

**PLASTER STONE.** Gypsum.

**PLASTIC.** Capable of being moulded, as clay, etc.

**PLASTIC, STRONG OR PURE CLAYS.** Those composed of silica and alumina, and only containing a small proportion of lime, magnesia, or other salts; this clay is sometimes called by the brick-maker "foul clay".

**PLASTOGRAPHY.** Formation of figures in plaster.

**PLAT.** A small plot of ground; in Scotland, a landing in a staircase.

**PLATBAND.** A border of flowers; a border.

**PLATBAND.** A flat square moulding whose projection is less than its breadth; the lintel of a door or window; a fillet between the flutings of a column.

**PLATE.** A flat piece of wrought metal.

**PLATE.** A general term applied to almost all horizontal timbers which are laid on walls, as wall plates, etc.

**PLATEAU.** A broad flat space of elevated land.

**PLATE GIRDER OR RIVETED PLATE GIRDERS.** Are those of  $\text{I}$  section, built up with iron plates and connected by angle iron, held together by rivets.

**PLATE GLASS.** A fine kind of glass cast in thick plates on an iron table and rolled out under a roller; also called "British plate glass".

**PLATE IRON.** Wrought iron in plates.

**PLATE LAYER.** One who lays rails, as for a railway.

**PLATE MARK.** A legal mark indicative of the quality of a metal.

**PLATE METAL.** Consists of running liquid iron into cast-iron moulds lined with loam and kept cool with water circulating below them so that the iron is chilled and easily broken up.

**PLATE LATCH.** A spring latch on an iron plate screwed to the door.

**PLATE RACK.** A rack, generally over the sink in a scullery, for the

reception of plates and dishes to drain after washing; a fixture for the reception of plates and dishes.

**PLATE STAPLE.** That formed of a metal plate, for a lock.

**PLATE TRACERY.** That having insertions of plain or ornamental circular apertures, without any projecting mouldings. "Bar tracery" is that in which these openings and the arch heads are separated by a bar of equal thickness instead of by a plate.

**PLATFORM.** An assemblage of timbers placed level and raised above the general level; in Scotland, a flat roof.

**PLATIN.** The seat of a machine tool on which the work is secured.

**PLATINA.** Platinum.

**PLATING.** Covering anything with a metal plate.

**PLATINOIDS.** Metals found associated with platinum.

**PLATINUM.** A metal of a dull silver colour.

**PLAY.** To pour or "play" water on a fire, etc., from a hose.

**PLAY.** The clearance allowed for a sash, drawer, etc., to slide.

**PLAY HOUSE.** A theatre.

**PLEASURE GROUNDS.** Grounds tastefully laid out for pleasure.

**PLECTRUM.** A small rod with which the ancients struck the lyre.

**PLEERRY.** A term applied by quarrymen to the split along a line of imperfect cleavage in blocks of slate.

**PLIABILITY.** The tendency of a body to alter its form temporarily under different stresses.

**PLIERS.** A kind of pincers for bending, etc.

**PLINTH.** The plain projecting face at the foot of a wall immediately above the ground; a square member forming the lower division of the base of a column or pedestal; also applied to a skirting.

**PLINTH BRICK.** A chamfered brick used for the top course of a plinth in a brick wall.

**PLINTHITE.** A brick red mineral or clay.

**PLINTHUS.** A brick or tile; any rectangular parallelopiped.

**PLIOCENE.** The most modern tertiary deposits.

**PLONGE.** In fortifications, the superior slope of a parapet.

**PLOT.** To make a plan; a plat, site or small extent of ground.

**PLOTTING.** The art of laying down or describing on paper the angles and lines of a plot of land, by any instrument used in surveying.

**PLOTTING SCALE.** A mathematical instrument, usually of box-wood, used in plotting ground.

**PLOUGH.** A joiner's tool for cutting grooves, which when formed are called "plough grooves".

**PLOUGHED AND TONGUED.** Boarding having a projecting tongue which fits into a groove in the next board, or both boards are grooved and a loose tongue slipped in.

**PLOUGH GROOVE.** A groove formed by a plane or a saw called a plough.

**PLOUGHSHARE.** The portion of a plough which turns up the ground.

**PLUG.** A wooden peg driven into a hole made for it in a wall; used for fixing joinery to.

**PLUG.** The peg of brass, attached to a chain, used for stopping the waste hole in a bath, lavatory basin, etc.

**PLUG.** In masonry, a kind of dowel made by running melted lead or fluid cement into a cavity made for its reception; used for joining stones together.

**PLUG.** That part in a water tap which by turning round shuts off the water.

**PLUG AND FEATHERS, OR KEY AND FEATHERS.** Are terms applied to methods of splitting hard stones by means of a long tapering wedge—the plug or key—and wedge-shaped pieces of iron called feathers which are driven into holes previously drilled into the rock for their reception, and thus forcibly split.

**PLUG AND WEDGE.** Consists of an iron conical plug with an eye at the top for a chain or hook to pass through, placed in a slightly larger conical hole sunk in the top of the stone directly over the centre of gravity, with an iron key-piece or

wedge slipped in by its side ; used for lifting large blocks of stone.

**PLUG CISTERN.** A water-closet cistern in which the water is released by the lifting of a plug or the opening of a valve, the water running only so long as the plug is suspended or the valve kept open.

**PLUGGING.** Consists of driving small fir wedges or plugs into the joints of walls or in holes made by cutting out the mortar with a chisel ; used for fixing woodwork to walls.

**PLUMB.** Perpendicular ; vertical ; perfectly upright ; to adjust by a plumb line ; to set in a perpendicular direction.

**PLUMBAGO.** A form of carbon used for making pencils.

**PLUMB BOB** or **PLUMMET.** A conical leaden weight attached to a line for ascertaining whether anything is perpendicular.

**PLUMBED UP.** Worked up to a true vertical surface.

**PLUMBER.** A worker in lead, as the providing and fixing of flashings, gutters, cisterns, closets, gas pipes, etc.

**PLUMBER'S CEMENT.** Consists of black resin one part and brick dust two parts, well mixed by a melting heat.

**PLUMBER'S IRON.** An iron soldering iron.

**PLUMBER'S JOINT.** A wiped joint.

**PLUMBERY.** The business of a plumber ; works or articles in lead ; the place where lead is wrought.

**PLUMBIC.** Pertaining to or containing lead.

**PLUMBIC OXIDE.** Is obtained from lead by freely exposing it in a molten state to the oxidising influence of the common atmosphere.

**PLUMBIFEROUS.** Producing or containing lead.

**PLUMBING.** The art of working in lead ; works or articles in lead.

**PLUMBING.** Working in lead.

**PLUMB LINE.** A line perpendicular to the horizon, made by dropping a plumb bob or plummet ; a line or cord with a plumb bob attached to it.

**PLUMB RULE.** Consists of a

wood batten with a plumb bob attached to it ; the cord is secured at the top of the batten allowing the plumb bob to hang down within a few inches of the bottom where a hole is made for its reception to keep it steady ; used to determine the perpendicularity of a structure, as a wall, etc.

**PLUMMET.** A plumb bob.

**PLUMMING.** In mining, the operation of sounding the place where to sink an air shaft.

**PLUNGER.** A cylinder used as a forcer or piston in pumps.

**PLUNGER.** The solid piston of a force pump, a contrivance for forcing water through a trap to clean it.

**PLUS.** A character (+) used as a sign of addition.

**PLUTEUS.** A wall to close the intervals between the columns of a building.

**PLUTONIC ROCKS.** Unstratified rocks, as granite, porphyry, etc.

**PLUTONIC THEORY.** The theory that unstratified rocks are due to igneous action.

**PLUVIAL.** Humid ; rainy ; due to the action of rain.

**PLUVIAMETER.** A rain gauge.

**PLY.** A twist, fold or plait.

**PLYERS.** A kind of balance used in raising or letting down a draw-bridge.

**PNEUMATIC CAISSON.** An air-tight chamber or box with no bottom, sunk under water to the bottom for the masonry of a pier to rest upon.

**PNEUMATIC PILE.** A metal cylinder which is sunk by atmospheric pressure.

**PNEUMATICS.** The science of elastic fluids, especially air.

**PNEUMATOLOGY.** Pneumatics.

**POCKET.** The hole cut in a pulley style, for inserting the weights.

**POCKET.** A hole in a wall for the end of a joist or beam.

**POCKET.** Small sinkings (usually triangular, etc.) in tracery work.

**POCKET PIECE.** The piece covering the "pocket" in a pulley style, left loose to allow the weights to be put in ; it is kept in its place by the parting bead and stop bead.

**PODIUM.** A dwarf pedestal wall ; a low wall under a row of columns ; a continued pedestal ; a balcony ; a closed parapet employed instead of an open balustrade.

**POINT.** A railway switch ; to fill the joints of masonry or brickwork with mortar pressed in with a trowel.

**POINT.** The term "point," used by gas-fitters, merely applies to a point of light, *i.e.*, one burner. It does not represent any fixed quantity of work, but varies according to circumstances. In an ordinary house the amount of gas-pipe does not vary considerably, nor the labour of fixing.

**POINT.** A mason's chisel with a small cutting edge.

**POINT.** In geometry, that which has neither length, breadth nor thickness.

**POINTED.** Masonry or brickwork is said to be "pointed" when it has had fresh mortar inserted into the joints *after* the wall has been built ; the old mortar is generally raked out to a shallow depth before inserting the new.

**POINTED ARCHITECTURE.** Gothic architecture.

**POINTED WORK, DABBED or DAUBED WORK.** Consists of bringing the faces of stones to a regular surface by picking them all over with the "point," giving it a pock-marked appearance ; stones dressed with a "point".

**POINTING.** In masonry or brickwork, inserting fresh mortar into the joints *after* the wall has been built.

**POINT OF DISTANCE.** In perspective, the distance of the drawing transferred upon the vanishing line from the centre, or from the point where the principal ray meets it.

**POINT OF SIGHT.** In perspective, the place of the eye whence the drawing is viewed, or the centre of it.

**POINT OF VIEW.** The point of sight.

**POINTS MAN.** A man in charge of switches on a railway.

**POLAR.** Pertaining to a magnetic pole, or situated near the poles of the earth.

**POLAR ANGLE.** The angle at a pole formed by two meridians.

**POLAR CIRCLES.** The Arctic and Antarctic circles.

**POLAR DISTANCE.** The distance of the circle of a sphere from its pole.

**POLARISATION.** A term given to internal local actions of cells which set up opposing E.M.F.'s to that of the cell ; the terminals of electricity generators are sometimes called poles, and the E.M.F. is measured at the terminals, hence "polarisation".

**POLARISATION OF LIGHT.** The resolution of all luminous vibrations into one orbit, which may be plain, elliptical or circular.

**POLARISCOPE.** An instrument for showing the phenomena of polarised light.

**POLARITE.** A patent filtrating material used in sewage works.

**POLARITY.** A magnet suspended so that its movements are unrestricted in any direction, will turn one point to the north and the other to the south, hence the north and south poles of the magnet.

**POLDERS.** Low lands, under the level of the sea or a river, that have been drained and cultivated, and are protected by dykes.

**POLE.** The terminal of a generator.

**POLE.** One of the two points in a body where the attractive or repelling force is greatest ; one of the points of the axis on which a sphere revolves.

**POLE.** A rod or perch ; a measure of length of five and a half yards.

**POLE.** In surveying, a long slender piece of wood, painted different colours, and shod with iron for sticking into the ground.

**POLE MOSCOPE.** A glass with a mirror at an angle to view objects obliquely.

**POLE PLATES.** Timbers notched into roof trusses to carry the feet of the common rafters ; they are necessary when there is a gutter running parallel with the wall, or when a gutter is required between two roofs.

**POLING BOARDS or SHORT CLEADINGS.** Are upright planks about three feet long and one and a half thick; used in long narrow excavations, such as trenches for foundations.

**POLISHED.** In Scotland, applied to rubbed masonry.

**POLISHED BRICKS.** Those rubbed upon a bench plated with iron, to make their surfaces even, afterwards dressed in the same manner as a dressed brick.

**POLISHED PLATE GLASS.** Chiefly used for shop windows, etc.; it can be obtained of any thickness from an eighth to an inch thick; it is composed of rough plate of good materials, the polishing being done by rubbing two plates together with emery or other powder between them.

**POLISHING.** Making smooth or glossy either with rubbing, varnish, pumice, etc.

**POLISHING STONE.** A method performed by rubbing first with fine sand and water under an iron rubber, then with emery, and, lastly, with putty and flannel.

**POLL or POLLED.** To split large flint or river pebbles; sometimes used in walling.

**POLLARD.** A tree having its top cut off, or which has been frequently lopped or polled of its branches, a practice very injurious to good timber.

**POLLARD OAK.** A variety of oak produced by lopping off the heads and branches or otherwise tampering with oak trees for a number of years whilst growing. This treatment produces the formation of burrs and other abnormal excrescences; used chiefly for veneers, or high-class cabinet work.

**POLLED.** Said of a tree having its top cut off.

**POLLUTE.** To make foul or unclean.

**POLLUTION.** The act of polluting; that which pollutes or makes foul or unclean.

**POLYACOUSTIC.** Capable of multiplying or increasing sound. An instrument for doing so.

**POLYCHROMATIC.** Exhibiting a play of colours.

**POLYCHROME.** Work executed in many colours.

**POLYCHROMY.** The use of decorative colours.

**POLYCHROMY.** The ancient art of colouring statuary or buildings.

**POLYFOIL.** An ornament formed by a moulding disposed in a number of segments of circles.

**POLYGON.** A figure having more than four sides. Polygons are regular or irregular; the former has all its sides and angles equal, whilst in the latter they are unequal.

**POLYGONAL or POLYGONOUS.** Having many angles.

**POLYGONAL RAG WORK.** Rubble walling with the face of the stones worked to a polygonal shape; also called "polygonal rubble".

**POLYGRAM.** A figure consisting of many lines.

**POLYGRAPH.** A manifold writer; a collection of different works.

**POLYGRAPHY.** The art of writing in or deciphering many ciphers.

**POLYHALITE.** A brick red mineral.

**POLYHEDRAL.** Having many sides.

**POLYHEDRON.** A geometrical solid containing many sides or planes.

**POLYMNITE.** A stone marked with dendrites and black lines.

**POLYSPAST.** A machine consisting of many pulleys.

**POLYSTYLE.** An edifice with numerous columns, or columns behind other columns, such as a portico with a row of inner columns.

**POLYTECHNIC SCHOOL.** A school for instruction in many practical arts.

**POME.** A metal ball filled with hot water with which priests warm their hands at the altar.

**POMEL or POMMEL.** A boss, knob or ball on the top of a spire, turret, etc.

**POND.** A body of still water; a stagnant pool.

**PONTAGE.** A duty paid on a bridge for maintaining it.

**PONTEE.** An iron instrument by which the hot glass is taken out of the glass pot.

**PONTIFICE.** The structure of a bridge.

**PONTIFICAL.** Bridge building.

**PONTOON.** A flat-bottomed boat-like structure used for constructing temporary bridges.

**PONTOON BRIDGE.** A bridge formed with pontoons.

**POOD.** A Russian weight equal to thirty-six English pounds.

**POOL HOLES.** Holes made by sinking notches in hard blocks of stone, such as granite, and along the proposed line of fracture at distances apart varying with the hardness of the stone, wedges, gads, etc., are driven into the holes to split the stone into the required size.

**POORHOUSE.** A workhouse.

**POOR LAWS.** The body of laws relating to the maintenance of the poor.

**POOR LIME.** A lime containing from 60 to 90 per cent. of carbonate of lime together with other impurities; slakes sluggishly, and will not take much sand.

**POPLAR** (*Populus*). A tree of several varieties, the black and the common white variety being the most esteemed; it is light, tough, soft, not liable to shrink or swell, and is moderately durable if kept dry; it is the nearest of all timber to being fireproof; of a yellowish or brownish-white colour, of uniform texture, and without large medullary rays. Found in most parts of England. The Lombardy poplar is inferior.

**POPPET HEAD** or **POPPET.** That part of a lathe holding the back centre, and which slides along the bed of the lathe to take the different lengths of stuff to be turned.

**POPPIES.** Flint or river pebbles.

**POPPY HEAD.** A finial of foliage or other ornaments in woodwork, as the termination of the ends of open church seats, often carved into a bunch of foliage.

**POPPY OIL.** An oil extracted by pressure from the seeds of the poppy; sometimes used for paint of light tints; it should be colourless or of a very light yellow tinge—eventually

becomes of a brownish hue; free from smell; it is far inferior to linseed oil in drying and other qualities.

**PORCATE.** That formed in ridges.

**PORCELAIN.** A fine white semi-transparent earthenware.

**PORCELAINISED.** Altered by heat, so as to resemble porcelain.

**PORCELLANITE.** A semi-vitrified clay.

**PORCH.** The "Porch," the school of the Stoics (from Zeno giving his lectures in the painted porch at Athens).

**PORCH.** A vestibule; a covered walk; a hood placed over a doorway; a small portico attached to but considerably lower than the main structure.

**PORCHERIE.** The French term for a stable for pigs in abattoirs.

**PORES.** Minute orifices or small interstices between the solid parts of bodies, as stone or wood, by which moisture or fluids are exhaled or absorbed.

**POROUS.** Having pores, as wood or stone.

**PORPHYRITIC GRANITE.** The term used for varieties in which large, distinct, independent crystals (sometimes called horse's teeth) of feldspar occur.

**PORPHYRY.** A dark-coloured rock composed of a compact feldspathic base, and having crystals of feldspar of a lighter colour running through it.

**PORPORINO.** A composition of mercury, tin and sulphur; used by mediæval artists instead of gold.

**PORRECT.** Extending forth horizontally, as a cantilever, etc.

**PORT.** A harbour; a sheltered piece of water into which vessels can enter and remain in safety.

**PORTA.** A gate in a wall enclosing any open space.

**PORTABLE.** Said of a small structure not secured to the earth in any way.

**PORTAGE.** The cost of carriage; an entrance; a port hole; a break in a line of water communication, over which goods, etc., have to be carried.

**PORTAL or PORTAIL.** The principal front of a church, or that in which the principal entrance is placed.

**PORTAL.** An arch over a door or gateway; an opening for entrance under cover; a gate.

**PORT BAR.** A bank at the mouth of a harbour; a boom across a port to prevent entrance or egress.

**PORT CHARGES or DUES.** Charges payable on a ship or its cargo.

**PORTCULLIS.** A strong grated framing of timber, resembling a harrow, hung over the gateway of a fortress or castle.

**PORTER.** A gatekeeper; a caretaker; a doorkeeper.

**PORTFOLIO.** A large portable case for keeping drawings, papers, etc., in.

**PORT HOLE.** A steam passage out of a cylinder.

**PORTICO.** A porch in front of a building with the roof in the form of a pediment supported by a row of columns. The pediment is the distinguishing feature of all the classic orders. Porticoes are classed as—

Tetrastyle when having four columns.			
Hexastyle	“	“	six
Octostyle	“	“	eight
Decastyle	“	“	ten

**PORTICO.** A covered walk, piazza or arched pathway having columns.

**PORTICUS.** A walk covered by a roof supported by columns.

**PORTIERE ROD.** A sliding rod fixed on the top of a door to hang a curtain on to exclude draught.

**PORTLAND CEMENT.** Is grey in colour; that now in use is made from chalk and alluvial clay; hydraulic in character; first made in England about 1843 and in America about 1874.

**PORTLAND CEMENT STUCCO.** Consists of a mixture of Portland cement and chalk.

**PORTLAND STONE.** A variety of oolite from the island of Portland; used both as a building and paving stone; of a dull whitish colour, heavy, and moderately hard.

**PORT OF ENTRY.** A port having a custom house.

**POSE.** The attitude of a figure, statue, etc.

**POSÉ.** In heraldry, said of a lion or beast standing still with all its feet on the ground.

**POSITIVE.** The point of a generator where the positive current leaves it.

**POSITIVE ELECTRICITY.** Electricity generated by the friction of glass. Same as Virtual Electricity.

**POSITIVE QUALITY.** A quantity affected with the sign +.

**POST.** A term applied in quarrying when the earth has been cleared down to the rock or “post”.

**POST.** A general term for any upright timber.

**POSTERN.** Any small side door or gate; usually employed in castellated architecture.

**POST FENCE or POST AND RAIL FENCE.** A rough wooden fence composed of a row of posts connected by horizontal rails between each post.

**POSTICUM.** A porch to a door in the rear of a Greek or Roman temple or other building.

**POSTIQUE.** In architecture, anything added as an ornament after.

**POSTSCENIUM or PARASCENIUM.** The back part of a theatre.

**POT.** A metal or earthen vessel for holding or boiling liquids; a size of paper 12½ × 15 inches.

**POTAMOLGY.** A treatise on rivers; the science of rivers.

**POT BOARD.** The lowest shelf of a kitchen dresser.

**POTENCE.** In heraldry, a cross resembling the head of a crutch.

**POTENTIAL.** Applicable electric motive force corresponding to “pressure” or “head” in hydraulics.

**POTENTIAL DIFFERENCE.** See Voltage.

**POT HOLE.** A circular cavity in the rocky beds of rivers; a peculiar cavity in chalk.

**POTICHOMANIA.** The coating the inside of glassware with varnished paper, etc., to imitate painted ware or china.

**POTIN.** A composition of copper, lead, tin and silver of which Roman coins were made.

**POT METAL.** A solder composed of two parts of lead to one of tin; it has to be fused in a pot (hence the name) on the fire under considerable heat; used for cisterns, gutterwork, etc.; also an alloy of tin and copper.

**POT METAL GLASS.** That having the colours mixed with the glass throughout. These colours are obtained by mixing metallic oxides, etc., with the glass when in a molten state.

**POT STONE.** An impure variety of soapstone formerly used for various utensils.

**POTTERN.** Pertaining to potters or pottery.

**POTTERN ORE.** A species of ore used by potters to glaze their ware.

**POTTER'S CLAY.** A variety of clay used by potters.

**POTTER'S FIELD.** A public burying place, especially in a city, for the poor.

**POTTERY.** Earthenware; the place where it is made.

**POTTLE.** A liquid measure of four pints.

**POUND.** A unit of weight consisting of twelve ounces troy or sixteen ounces avoirdupois; an English coin of account consisting of 20s.

**POURPARTY.** A division among partners of land formerly held in common.

**POWER.** The rate of doing work; a term applied to the force which, applied to a machine, produces motion.

**POWER.** In electricity, the rate of doing work. A generator has power in that it can send a current through a conductor by reason of its electro-motive force. The electrical unit of power is the watt.

**POYNTELL.** Paving formed into small lozenges or squares laid diagonally.

**POZZUOLANA.** A naturally burnt earth of volcanic origin; it is found in the form of a powder, somewhat coarse in grain; of a brown, red, grey or yellow colour; it is found at Pozzuoli, near Vesuvius, and other parts of southern Europe.

**POZZUOLANA CEMENT.** A hydraulic cement made from pozzuolana.

**POZZUOLANA MORTAR.** That made by adding to ordinary fat lime (or feebly hydraulic mortars) a proportion of pozzuolana that will make good its deficiency of clay.

**PRACTICE.** A rule in arithmetic for the abridgment of calculations.

**PRÆCINCTIONES.** The inside seat, step, passages or corridors which separated the seats in a Roman theatre.

**PRÆTEXTA.** A long white Roman garment with a purple border.

**PRAKRIT.** A Hindu language or dialect based on the Sanscrit, and which has been the source of various modern Indian languages.

**PRANCING.** In heraldry, applied to a horse rearing.

**PREACHING CROSS.** A cross erected in the highway, at which the monks and others formerly preached.

**PREAMBLE.** The description (which precedes the quantities in each trade in the bill) of materials, how mixed, how to be used, and how the work is to be done.

**PREBEND.** The stipend or maintenance granted to a canon of a cathedral or collegiate church out of its estate.

**PREBENDAL.** Pertaining to a prebend or prebendary; holding a prebend.

**PREBENDARY.** A stipendiary of a cathedral.

**PREBENDARYSHIP.** The office, rank or position of a prebendary.

**PRECEPTORY.** Formerly, a manor, or estate of a Knights Templar, on which a church was erected.

**PRECIOUS METALS.** Gold and silver.

**PRECINCTS.** The space round a church or religious house usually enclosed with a wall.

**PRECIPITATION.** The throwing down of the solid particles of sewage by means of chemical action.

**PREDIAL.** Consisting of land or farms; attached to land or farms.

**PREFERENCE SHARES.** Shares entitled to a dividend before ordinary shares.

**PREFERMENT.** A superior place, especially in a church.

**PREFERRED STOCK.** Stock which takes a dividend before other capital stock.

**PRELACY.** The office or position of a prelate.

**PRELATE.** An ecclesiastical dignity of the highest order, as an archbishop, bishop, etc.

**PRELATESHIP.** Prelacy.

**PREMIER.** In heraldry, most ancient.

**PREMISE.** A building and its adjuncts.

**PREMISES.** A building and its appurtenances.

**PRESBYTERY.** That part of a church comprising the choir and other eastern parts of the edifice.

**PRESS.** An instrument or machine for compressing any body or substance, or forcing it into more compact form.

**PRESS.** In Scotland, a cupboard.

**PRESSED BRICKS.** Those made in a metal mould or die in which is placed raw bricks, nearly dry; a considerable pressure is applied by means of a press, after which they are usually burnt in a kiln; generally used for heavy engineering work and foundations; they are not good facing bricks owing to their faces scaling.

**PRESSURE.** The force exerted by one body acting on another.

**PRICKER.** In quarrying, a thin piece of iron used to make a hole for the fusee or match to fire a blast.

**PRICKING OUT.** Planting out seedlings with wider spaces between than they have had when younger.

**PRICKING UP.** The term applied to the first coat of plaster on laths; it is used very stiff to prevent its dropping out again; laid on rough and afterwards scratched with a scratcher.

**PRICK POST.** Same as Queen Post; also applied to a slight post used in a post fence.

**PRICK PUNCH.** A pointed instrument used by smiths to mark centres; a centre punch.

**PRICK PUNCH.** A piece of tempered steel with a round point.

**PRILL.** A solid piece of pure ore.

**PRIMARY COLOUR.** One that cannot be produced by the mixture of others; they are yellow, red and blue.

**PRIMARY COLOURS.** Loosely: red, orange, yellow, green, blue, indigo and violet. Strictly: red, green and violet.

**PRIMARY ROCKS.** The earliest rocks of the earth's crust, from the Permian downwards.

**PRIME.** A figure in geometry that cannot be divided into any other figures more simple than itself, such as a triangle in plane figures.

**PRIME.** To carry over water with the steam from the boiler to the cylinder.

**PRIME COST.** The actual cost of anything exclusive of profit; generally written as P.C.

**PRIME NUMBER.** A number divisible only by unity.

**PRIMING.** The first coat of paint given to woodwork; it is composed of red and white lead ground in and mixed with linseed oil. To "prime" in painter's work is to use the above paint.

**PRIMITIVE COLOURS.** Red, yellow and blue.

**PRIMITIVE ROCKS.** See Primary Rocks.

**PRINCE'S METAL.** A compound of copper and zinc in imitation of gold.

**PRINCESSES.** Slates twenty-four by fourteen inches, sold by the thousand of twelve hundred. Princesses are also sold by the ton of twenty hundredweight, twenty-four inches long and of various breadths.

**PRINCESS TIE or POST.** A vertical post used in a queen post roof truss when the principal rafter requires extra support.

**PRINCIPAL.** A term applied to a framed roof truss.

**PRINCIPAL BRACE.** A brace immediately under the principal rafter, or parallel to it.

**PRINCIPAL POINT.** In perspective, a point in the perspective plane upon which a line will fall, drawn from the eye, perpendicular to that plane.

**PRINCIPAL POST.** The post on each side of a door opening in a quarter partition.

**PRINCIPAL RAFTERS.** The inclined timbers that rise from each end of a tie beam and meet at the king post at the top or apex; it supports the purlins which support the common rafters.

**PRINCIPAL RAY.** In perspective, the line passing from the eye to the principal point on the perspective plane.

**PRIORY.** A convent, of which a prior was the superior.

**PRISM.** A solid (or figure having length, breadth and thickness) whose bases or ends are similar, equal and parallel plane figures, and whose sides are parallelograms.

**PRISMATIC.** Resembling a prism; separated and formed by a prism.

**PRISMATIC RUSTICATION.** In Elizabethan architecture, rusticated masonry with diamond-shaped projections worked on the face of each stone.

**PRISM LIGHTS.** A triangular or prismatic bar of glass used for gathering and transmitting light through pavements, etc.; used in pavements for lighting underground cellars or basements.

**PRISMOID.** A figure that approaches the form of a prism; a solid figure having for its two ends any dissimilar parallel plane figure of the same number of sides, and all the upright sides of the solid trapezoids.

**PRISON.** A public building of massive structure for the confinement of criminals.

**PRIVET.** A shrub of the genus *Ligustrum*; used for making garden hedges.

**PRIVIES.** Elementary and insanitary forms of closets in which the excreta falls directly to a pit from which it is removed periodically.

**PRIVY.** A water-closet.

**PRIVY CHAMBER.** The private apartment in a royal residence.

**PRODOMUS.** The portico before the entrance to the cell of a temple.

**PRODUCT.** The result of multiplying two or more numbers.

**PROFILE.** The contour or outline of a cornice, moulding, figure or building, especially in vertical section.

**PROFIT.** Any gain or advantage resulting from labour, etc.

**PROGRESSIVE.** In stairs, a "progressive flight" is a straight flight of stairs.

**PROJECT.** A plan; a scheme; a design.

**PROJECTING BUTTS.** Projecting hinges used when a door, shutter, etc., has to swing clear of a projection; also called "Parliament hinges".

**PROJECTION.** A plan or delineation of an object on a plane.

**PROJECTION OF A SPHERE.** The representation of the several parts of its surface on a plane.

**PROJECTURE.** A jutting or standing out or prominence, as of mouldings, etc., beyond the face of a wall, column, etc.

**PROLATE.** Extended beyond the line of an exact sphere.

**PROMINENT.** Standing out, jutting, as of mouldings, etc.

**PRONAOS.** A porch, vestibule or area immediately in front of a temple.

**PROOF.** Trial or test, as of materials or buildings, to ascertain if they possess that hardness or firmness to resist any strain or weight upon them.

**PROOF DEFLECTION.** The deflection produced by the proof load.

**PROOF LOAD.** Is the greatest load that can be applied to a piece of material without producing permanent deformation or fracture.

**PROOF STRENGTH.** Is the intensity of stress required to produce the greatest strain of a specific kind without injuring the strength of the material used.

**PROOF STRESS.** Is the strain, heavier than that required, which is put on material, etc., in order to test its working stress; the stress produced by the "proof load".

**PROP.** Any vertical timber or structure for support.

**PROPER.** A "proper ledge door" is one wrought, ploughed, tongued

and beaded. A "proper door frame" is one wrought, rebated and double beaded.

**PROPLASM.** A mould; a matrix.

**PROPLASTICS.** The art of making moulds for castings.

**PROPORTION.** A term used absolutely in the sense of "good proportion," that is, symmetry.

**PROPORTION.** A rule by which from three given quantities a fourth may be found, bearing the same ratio to the third as the second bears to the first; the rule of three; the algebraic expression of equality of ratios.

**PROPORTIONAL.** Having a constant ratio; the second of any three quantities in continued proportion.

**PROPORTIONAL COMPASSES.** Those having two pair of points movable on a shifting centre which slides in a groove and thereby regulates the proportion that the opening at one end bears to that of the other.

**PROPYLÆUM.** In Greek architecture, an open court in front of a temple; the vestibule of a house; a portico in front of a gate.

**PROPYLON or PROPYLÆA.** A gateway before a temple.

**PROSCENIUM.** The front part of the stage of a theatre.

**PROSERPINE.** The daughter of Ceres and Jupiter, and wife of Pluto.

**PROSTYLE.** A portico in which the columns stand in advance of the building; a temple with a portico in front; the portico itself.

**PROTHESIS.** A credence table; a small table near the south side of the altar or communion table to receive the elements.

**PROTHYRA.** The Greek word for portico.

**PROTHYRIS.** Ancient term for a cross beam or rafter, or a quoin, or a course of a wall.

**PROTHYRUM.** A portal; a porch at the front or outer door of a Roman house.

**PROTOGINE.** A kind of talcose granite.

**PROTOZOIC.** Belonging to the strata in which, or to the time when, life first appeared.

**PROTRACTION.** In surveying, the act of plotting or laying down on paper the dimensions of a field; that which is so laid down.

**PROTRACTOR.** An instrument used in laying down and measuring angles on paper.

**PROVIDE, PROVIDED.** Said of a "provision" in a contract or estimate.

**PROVISION.** A sum of money provided in a builder's estimate for some special work or materials, etc.

**PROVISION.** When it is uncertain at the time of taking out "quantities" what quantity of a certain item is likely to be required or done the word "provision" is written after the measurement, and it signifies that at the completion of the job the work in connection with the item marked "provision" will be measured up and the quantity added to or deducted from the quantities taken out as the case may be.

**PROVISIONAL AMOUNT.** A certain sum of money entered in a bill of "quantities" to be used as a whole or in part or deducted as directed by the architect—*i.e.*, (money) provide the sum of £— for stoves, chimney pieces and ranges to be selected by the architect. If after the architect has made his selection of the articles there is a balance left, or if for some reason or other they are not required, he deducts the balance or amount in full from the total amount of contract in settling up.

**PROVISO.** An article or clause in a contract or specification by which a condition is introduced; a condition or stipulation.

**PRUDHOMME.** A member of a French board, composed of masters and workmen who arbitrate in trade disputes.

**PRUNE.** To cut off the superfluous branches of trees.

**PRUNING.** To prune.

**PRUNING HOOK or KNIFE.** An instrument of various forms for pruning trees.

**PRUSSIAN BLUE.** A blue pigment produced by mixing prussiate of potash (ferrocyanide of potassium).

with salt of iron; the potash is produced by calcining and digesting old leather, hoofs, blood and other animal matter with carbonate of potash and iron filings.

**PRUSSIAN BROWN.** An orange brown pigment obtained by expelling by fire the blue colouring principle in Prussian blue.

**PRUSSIAN GREEN.** A pigment made by mixing different substances with Prussian blue.

**PRUSSIAN TIMBER.** Is generally known as Dantzic, Memel or Stettin.

**PRYTANEUM.** In Greek states, a public building in which ambassadors and citizens were entertained.

**PSALTERY.** A stringed instrument used by the ancient Jews.

**PSAMMITE.** Sandstone.

**PSEUDISODOMUM.** A method used by the Greeks for building walls, the heights, thicknesses and lengths of the stones being different; whereas in the method called "isodomum" the stones are of equal thicknesses and lengths.

**PSEUDO.** A Greek prefix signifying false, counterfeit or spurious.

**PSEUDODIPTERAL.** Falsely or imperfectly dipteral.

**PSEUDOPERIPTERAL** or **IMPERFECT PERIPTERAL.** A disposition in ancient temples in which the columns on the sides are engaged in the walls, and in which there was no portico except to the façade in front.

**PSILOMELANE.** An amorphous ore of manganese.

**PSYCHROMETER.** A form of hygrometer for measuring the tension of watery vapour in the atmosphere.

**PTERA.** The colonnades which surround the cella of a temple.

**PTEROMA** or **AMBULATIO.** The spaces between the walls of the cella of a temple and the columns of a peristyle.

**PUBLIC HOUSE.** An ordinary inn; generally applied to a house with only a beer license.

**PUDGING STONE.** A coarse sandstone composed of silicious pebbles, flint, etc., united by cement.

**PUDGLE.** A mixture of clay and

sand worked together, or simply clay and water mixed up stiff; used for rendering walls, piling enclosures, etc., water-tight.

**Puddled Bars No. 1 or Rough Bars.** Are the commonest description of wrought iron, made by pressing the "bloom" between grooved rollers which convert it into bars about three or four inches wide, three-quarters to one inch thick and ten or twelve feet long.

**Puddled Steel.** Is produced by stopping the puddling process used in the manufacture of wrought iron before all the carbon has been removed.

**Puddler.** One who converts cast iron into wrought; one who makes "puddle".

**Puddling.** Consists of melting pig iron in a reverberatory furnace, thus the metal is subjected to the heat of the flame and a strong current of air and also kept clear of the fuel.

**Puddling.** The filling behind a wall, filling up a cavity, or banking up with clay tempered with water (puddle) and carefully rammed down with beaters or beetles.

**Puddling Balls.** Are clotty lumps of pure iron collected by the puddler and pressed together with the tool until they are formed into lumps weighing three-quarters of a hundredweight or more.

**Pudlakes.** Pieces of timber to serve the purpose of handspikes.

**Pugging.** Rough plastering or coarse mortar laid upon rough boarding between the joists of a floor to prevent sound.

**Pug Mill.** A mill for working up clay.

**Pug Piling.** The same as Pile Planking or Dovetailed Piling.

**Pulford's Magnetic Paint.** Is made from the magnetic or black oxide of iron.

**Pull or Pulls.** Another term for handles or pulls to bells, water-closet fittings, etc.

**Pulley.** One of the six mechanical powers; a small wheel turning on its axis with a rope, chain or belt passing over it.

**PULLEY.** A small wheel with a groove on the rim, turning on a pin, for a cord to pass over, as in a sash frame, axle pulleys.

**PULLEY MORTISE.** Same as Chase Mortise.

**PULLEY STYLE OR CHEEK.** The vertical uprights next the sash and containing the pulleys.

**PULPIT.** An elevated enclosed space in which a preacher stands; it is often of an elaborate description.

**PULPIT LATCH.** A common spring latch turned by an ordinary door handle, and usually having a small bolt.

**PULPITUM.** The wooden stage of a theatre; a platform.

**PULP PAPER.** Ordinary wall-paper, or common paper whose body is of the general surface colour.

**PULVINATED.** Convex; bulged out; said of a frieze whose face is convex instead of plane.

**PUMICE OR PUMIC STONE.** A hard light spongy volcanic substance; used, both in lump and powder, for rubbing down work to get a perfectly smooth face to paint or polish on.

**PUMP.** A hydraulic engine for raising water; made in various forms.

**PUMP BRAKE.** The arm or handle of a pump.

**PUMP DALE.** A pipe to convey water from the pump cistern through the ship's side.

**PUMP GEAR.** The apparatus belonging to a pump.

**PUMPHOOD.** The semi-cylindrical wooden frame covering the upper wheel of a chain pump.

**PUMPING ENGINE.** A steam engine for raising water.

**PUMPING LEVEL.** The level to which the water of a well sinks when the maximum continuous supply is being drawn from it.

**PUMP SPEAR.** The piston rod of a pump.

**PUMP STOCK.** The solid body of a pump.

**PUN.** Same as to "ram" earth, clay, etc.

**PUNCH.** An iron instrument for stamping or perforating holes.

**PUNCH.** A mason's tool similar to a point.

**PUNCH, PUNCHEON, DOLLY or FOLLOWER.** A short post or block placed above a pile when it has to be driven beyond the reach of the ram.

**PUNCHED.** Said of a hole in a metal plate when made by pressure with a punch; also said of nails when driven by a punch below the surface.

**PUNCHED WORK.** Masonry dressed with a punch.

**PUNCHEON.** Short upright timbers in a partition; usually called "studs" or "quarters"; also applied to short "dead shores".

**PUNCHING BEAR.** A machine for punching holes in iron.

**PUNKAH.** A huge fan hanging from the ceiling in Indian houses to ventilate an apartment; sometimes used in England.

**PUNNERS.** Wooden rammers used for ramming earth round footings of walls, etc.

**PUPPET VALVE.** A disc with a stem and vertical motion to and from its seat.

**PURBECK PITCHERS.** Square stones brought from the island of Purbeck; used for paving purposes.

**PURBECK STONE.** A limestone or fresh water deposit from the island of Purbeck; of an ash colour, heavy, moderately hard.

**PURCHASE.** To move by mechanical power; advantage gained by the application of any mechanical power.

**PURE EARTH WHITES.** Are lime carbonates or sulphates.

**PURE LIME.** That calcined from pure or nearly pure carbonate of lime; slakes violently with great disengagement of heat, will take a large proportion of sand.

**PURFLE, PURFILE.** To decorate with a wrought border.

**PURFLED.** Ornamented work in stone or other material representing embroidery, drapery or lace work.

**PURLIEU.** Formerly a piece of disafforested land, the extent of which was ascertained by perambulation.

**PURLIN.** In roofing, a horizontal timber to support the common rafters, placed parallel with the eaves, and in the middle of the rafters to prevent them sagging or bending; sometimes called "ribs" and "rafter spars".

**PURLIN ROOFS.** Those when partition walls are run up to take the place of principals and carry the purlins which carry the rafters as usual.

**PURPLE.** A colour composed of red and blue; the third and last of the secondary colours.

**PURPLE BLACK.** A preparation of madder; of a deep purple hue.

**PURPLE BROWN.** A pigment of a reddish-brown colour; should be used with boiled oil; for outside work a little varnish and driers should be added.

**PURPLE BROWN OXIDE.** A hydrated peroxide of iron; used as a basis for paint.

**PURPLE LAKE.** That prepared from cochineal.

**PURPLE OCHRE OR MINERAL PURPLE.** A chocolate-coloured ochre obtained from the Forest of Dean, Gloucestershire.

**PURPOSE MADE.** Made to a special pattern different from the ordinary stock patterns.

**PURPURE.** In heraldry, purple, which is represented in an engraving by diagonal lines from left to right.

**PURPURINE.** A colouring principle existing in madder.

**PURROCK.** A small enclosure or plot of land.

**PURSUIVANT.** In heraldry, an attendant on heralds.

**PUSH.** A small knob or button to ring a bell, etc.; a bell push.

**PUSH TAP.** A water tap in which the water is turned on by pushing in a knob or button; used in lavatories, street fountains, etc.

**PUTEAL.** The marginal stone of a well; an enclosure round the mouth of a well.

**PUTLOG.** A short timber or bearer for a scaffold to rest on whilst building; one end is supported by the wall, and the other by the ledgers.

**PUTLOG HOLE.** Small holes left in a wall for the insertion of the putlogs in scaffolding.

**PUTT.** The skewback or abutment of an arch.

**PUTTING A FACE ON OR TINNING THE BIT.** Expressions used by plumbers in soldering; the bit is filed quickly and quite bright, a little fine solder being melted so that it will drop on the tin pan and resin; the nose of the bit is then rubbed quickly upon the solder and resin in the pan, with the result that the bit is tinned.

**PUTTY.** In plastering, fine mortar or "fine stuff," consisting of lime and water.

**PUTTY.** A mixture of whiting and linseed oil, used in glazing, etc.; also applied to a powder of calcined tin, used in polishing glass and steel.

**PUZZOLANO OR PUZZOLANO.** Same as Pozzuolana.

**PYCNOSTYLE.** An arrangement of columns in which the intercolumniations are equal to one diameter and a half of the lower part of the shaft.

**PYLON.** An Egyptian gateway with tapering towers on each side.

**PYRAMID.** A solid formed by several triangular planes which meet in a point and terminate in the same plane rectilinear figure.

**PYRAMIDION.** The small flat pyramid which terminates the top of an obelisk.

**PYRAMIDOID, PYRAMOID.** A solid resembling a pyramid.

**PYRARGILLITE.** A hydrated silicate of alumina from Finland.

**PYRARGYRITE.** A sulphide of silver.

**PYRENE.** A crystalline substance obtained from coal tar.

**PYRENEITE.** A variety of garnet.

**PYRHELIOMETER.** A contrivance for measuring the intensity of the sun's heat.

**PYRITES.** In copper, a combination of copper and sulphur.

**PYRITES.** In iron, a combination of sulphuret of iron and sulphur.

**PYRITES.** In slates, are of two varieties; those containing white iron pyrites or marcasite should be

rejected, whilst those containing ordinary iron pyrites have been found to weather remarkably well.

**PYRO-ELECTRIC.** Becoming electric under heat; a body that does so.

**PYROLOGY.** The science of heat.

**PYROLUSITE.** A black ore of manganese.

**PYROLUSITE.** One of the most important of the ores of manganese.

**PYROMETER.** An instrument for measuring the expansion of bodies by heat, or for measuring high degrees of temperature.

**PYROMETRY.** The measurement of heat by expansion; the measurement of high degrees of heat.

**PYROMORPHITE.** Native phosphate of lead.

**PYRONOMICS.** The science of heat.

**PYROPE.** A deep red garnet.

**PYROPHANOUS.** Rendered transparent by heat.

**PYROPHORUS.** Taking fire on exposure to the air; any substance taking fire spontaneously, or on a slight rise of temperature.

**PYROSCOPE.** An instrument invented for measuring the intensity of radiant heat or cold.

**PYROSMALITE.** A hydrated silicate of iron and manganese which when heated emits a smell like chlorine.

**PYROXYLE, PYROXYLIN.** Any explosive obtained by immersing vegetable fibre in nitric or nitrosulphuric acid and then drying it.

**PYTHIAN.** Pertaining to Delphi, to Apollo, or to his priestess who delivered oracles at Delphi.

**PYTHIAN GAMES.** One of the four great national festivals of ancient Greece, celebrated every fifth year near Delphi.

**PYX.** The covered vessel in which the host is kept; the box in which sample coins are placed in the English mint.

## Q.

**Q.** As a numeral, Q stands for five hundred, and with a dash over it for five hundred thousand.

**QUAD, QUOD.** A quadrangle or court, as of a college, jail, etc.

**QUADRA.** A square border or frame; the square border of frame round a basso-relievo panel, etc.; also applied to a "socle".

**QUADRÆ.** The plinth or lower members of the podium; the bands or fillets of the Ionic base.

**QUADRANGLE.** An open square surrounded by buildings; the inner square or rectangular court of a building; a plane figure with four angles and four sides.

**QUADRANGULAR.** Having four angles and four sides.

**QUADRANT.** The fourth part of a circle; or an arc of 90°.

**QUADRANT.** An instrument used by surveyors for taking vertical angles.

**QUADRANT.** A fastener or regulator for a fanlight; worked by cords and pulleys.

**QUADRANTAL.** A cubical vessel

among the Romans containing eighty pounds of water; that included in the quarter of a circle; pertaining to a quadrant.

**QUADRANT IRON.** A term applied to bar iron whose section is a quadrant or quarter circle.

**QUADRANT OF ALTITUDE.** A graduated slip of brass fitted to an artificial globe and used to measure altitudes, etc.

**QUADRAT.** An instrument used in taking altitudes; a block of type metal lower than the type, used for filling out lines, etc.

**QUADRATE.** A square; square; having four equal and parallel sides.

**QUADRATIC.** Pertaining to or evolving a square.

**QUADRATIC EQUATION.** An equation containing the square of the unknown quantity.

**QUADRATICS.** Algebra dealing with quadratic equations.

**QUADRATRIX.** A curve by means of which right lines can be found equal to the circumference of circles or other curves and the several parts.

**QUADRATURE.** The act of squaring; the reducing of a figure to a square, or finding a square equal in area to another figure.

**QUADREL.** A kind of artificial stone, made square, of chalky earth and dried in the shade.

**QUADRIFORES.** Formerly, folding doors whose height was divided into two.

**QUADRIGA.** A four-horse chariot.

**QUADRILATERAL.** The space enclosed between and defended by four fortresses.

**QUADRILATERAL.** A plane figure with four sides and four angles; a quadrangular figure; having four sides.

**QUADRINOMIAL.** Consisting of four terms; a quantity consisting of four terms.

**QUADRIVALVES.** A door with four folds of leaves.

**QUADRUNE.** A gritstone with a calcareous cement.

**QUÆSTOR.** The public treasurer of ancient Rome.

**QUAG.** A quagmire; a bog.

**QUAGGY.** Said of a tree when the centre is full of shakes and clefts. Timber grown on a loose soil is often what is termed "quaggy".

**QUAGMIRE.** Soft, wet, marshy land that shakes or yields under the foot.

**QUALITIES AND BRANDS.** In timber, differ very much, one merchant's second quality being often equal to another's first quality. Baitic planks, deals and battens are generally classed as crowns, crown brack, first quality, second quality, etc.; there is little or no demand for crown or crown brack goods for building purposes.

**QUANTITIES OR BILL OF QUANTITIES.** A schedule or list of the material and labour required in the erection of a building.

**QUANTITY OF MOTION.** The product of the mass or moving body by the velocity.

**QUANTITY SURVEYOR.** One who prepares a "bill of quantities".

**QUARREL.** A term variously applied, as a small piercing in a tracery window, a small square or

diamond-shaped paving brick or stone, a stone quarry, a diamond-shaped pane of glass or a square pane placed diagonally. Same as Quarry Light.

**QUARREL.** A glazier's diamond.

**QUARRIED.** Dug from a pit.

**QUARRIER.** A quarryman.

**QUARRIES.** Tiles used for flooring purposes.

**QUARRY.** A pit or place from which stones for building are dug; to dig or take from a quarry; quarrying.

**QUARRY.** A pane of glass, especially one cut in a lozenge or diamond form.

**QUARRY FACE.** The natural face of the stone as it comes from the quarry.

**QUARRY FACED STONES.** Those whose faces are left untouched as they come from the quarry.

**QUARRYING.** The business or act of digging stones from a quarry.

**QUARRYINGS.** Small pieces of stone chipped off the different stones found in quarries.

**QUARRY LIGHT.** A diamond or lozenge-shaped pane of glass used in lead lights.

**QUARRYMAN.** A worker at or in a quarry.

**QUARRY PITCHED STONES.** Those with their faces merely scabbled, or roughly squared in the quarry.

**QUARRY SAP.** The moisture in stone when freshly quarried.

**QUARRY WORK.** In lead glazing, is work of a diamond pattern.

**QUART.** The fourth part of a gallon; two pints.

**QUARTATION.** The process of separating gold from silver by nitric acid.

**QUARTER.** The fourth of a cwt., or twenty-eight pounds.

**QUARTER.** In heraldry, one of the divisions of a shield when divided cross-wise; also applied to an escutcheon.

**QUARTER.** A quatrefoil.

**QUARTER GRAIN.** The transverse position or that which is in the direction of the annular rings or plates.

**QUARTERING.** A term applied to any small scantling such as from  $2 \times 2$  to  $6 \times 2$ .

**QUARTERING.** The stud work of a partition ; a series of quarters.

**QUARTERING.** In heraldry, the division of a shield containing many coats ; the act of dividing a coat of arms into quarters by perpendicular and horizontal lines.

**QUARTERING.** A method of cutting or converting an oak log so as to avoid having the heart in the centre of the stuff as that part is always shaky.

**QUARTERLY.** In heraldry, arranged according to the four quarters of the shield.

**QUARTERN.** The fourth part of a pint ; the fourth part of a peck.

**QUARTER OF TIMBER.** Contains thirty deals.

**QUARTER PARTITION.** One consisting of quarters placed about twelve inches apart and covered with laths and plaster.

**QUARTER ROUND.** Same as Ovolo and Echinus.

**QUARTERS.** The vertical timbers used in stud or quarter partitions ; small vertical timbers seldom exceeding  $4 \times 3$ .

**QUARTER SAWED.** A term applied to boards cut out on a radius from the centre of the periphery of a tree.

**QUARTER SPACE LANDINGS.** In staircasing, that in which the landing is the same width as the flight and usually made square ; also called "quarter pace".

**QUARTO.** A book formed by folding a sheet twice, making four leaves or eight pages, often written 4to.

**QUARTZ.** A mineral of pure silica.

**QUARTZIFEROUS.** Consisting of quartz or that chiefly.

**QUARTZIFEROUS PORPHYRY.** Consists of a base containing a granular crystalline compound of quartz and feldspar with individual crystals of quartz and feldspar ; of various colours.

**QUARTZITE.** Quartz rock.

**QUARTZOSE, QUARTZOUS.** Containing more or less quartz.

**QUATERNION.** The relation existing between any two right lines having definite lengths and directions in space, depending upon four irreducible geometrical elements.

**QUATREFOIL.** In heraldry, four-leaved grass.

**QUATREFOIL.** A geometrical figure used in tracery ; it consists of four lobes or segments of circles joining each other and forming cusps.

**QUAY.** A landing place or wharf.

**QUEBEC YELLOW PINE** (*Pinus variabilis*). Is chiefly imported from Quebec ; generally used for masts and yards of large ships.

**QUEEN ANNE ARCH.** An arch made up of a semicircle and two horizontal sides ; also called a "Venetian arch".

**QUEEN BOLT.** An iron rod or bolt answering the same purpose in iron roofs as what a queen post does in wood roofs.

**QUEEN CLOSER.** A brick cut longitudinally in half and built in as a half header in order to insure a bond, or it may be a bat cut in two halves.

**QUEEN POST.** A vertical post in a queen post roof truss dividing the tie beam into three (generally), equal parts.

**QUEEN POST ROOF.** A roof or truss differing from a "king post roof or truss" in that it has two upright posts, called queen posts, framed into the tie beam.

**QUEENS.** Slates twenty-seven, thirty, or thirty-six inches in length and of various breadths ; they are sold by the ton of twenty hundred-weight.

**QUEEN'S METAL.** An alloy composed of tin, bismuth, antimony and lead.

**QUEEN'S WARE.** Glazed earthenware of a cream colour.

**QUENCH PAIL.** The term applied by plumbers to the pail for the water to quench or cool the handles of their irons.

**QUEBECITRON.** An American oak of very large size.

**QUERCUS.** The oak genus of trees.

QUERK. See Quirk.

QUERNAL. Of or pertaining to the oak.

QUERY. A mark of interrogation, thus, ?.

QUICKBEAM. The mountain ash.

QUICKLIME or CAUSTIC LIME. Is the residuum left by burning limestone in a kiln, the action of the fire driving off the carbonic acid in the form of gas. The calcareous earth or lime left behind in a pure state (or nearly so) is called quicklime.

QUICKMATCH. A combustible preparation made by dipping cotton wick in a composition of vinegar, saltpetre, etc.

QUICKSAND. Sand easily moved or readily yielding to pressure.

QUICKSET. To plant shrubs or trees for a fence.

QUICKSILVER. A fluid silvery metal of great mobility.

QUICKSILVERED. Covered with a composition of quicksilver and tin or other metal, as a mirror.

QUINCUNX. A plantation of trees disposed in a square, consisting of five trees, one being in the middle of the square.

QUINDECAGON. A plane figure with fifteen angles.

QUINCECEMVR. One of a college of fifteen priests, who had charge of the Sibylline books.

QUINK. A piece of ground taken out of any regular ground plot and allotted to a yard, etc.

QUINQUANGULAR. Having five angles.

QUINTAL. A weight of 100 or 112 lb.

QUIRK. The small acute channel, groove or recess between beads or mouldings.

QUIRK BEAD. A bead flush with the surface; when raised above it is called a cock bead.

QUIRK FLOAT. A mitre of wood splayed off to an angle at one corner; used for floating in angles and mitres to mouldings.

QUIRK MOULDING. A moulding whose convexity is sudden in the form of a conic section.

QUIT RENT. Rent paid by the freeholders and copy-holders of a manor in discharge of other services.

QUOIN. The external angle of a wall; a corner stone.

QUOIN END. A projecting end of a wall when finished fair.

QUOINS. A term sometimes applied to the narrow end of winders in stairs.

QUOINS. Stones or bricks placed at the external angles of a wall; a quoin is a header for one face and a stretcher for the other.

QUOTATION. An estimate or the current price of anything.

QUOTE. To quote is to give the current price of anything.

QUOTIENT. The result obtained by dividing one quantity by another and showing how often the less is contained in the greater.

## R.

R. As a numeral, R stands for eighty, and with a dash over it for eighty thousand.

R. Applied to drawing paper signifies "rough," and has a coarsely grained surface.

RABBIT. See Rebate.

RABBIT or REBATE PLANE. A joiner's plane used to cut a groove or sinking on the edge of a board.

RACE. A strong or rapid current, or its channel, leading water to a mill-wheel.

RACE. Fragments of limestone found in some brick earth.

RACE-COURSE. A mill-race.

RACE-GROUND. A race-course.

RACEMATION. A cluster, as of grapes, etc.

RACE-TRACK. A race-course.

RACK. An open framework in which articles are arranged, as a plate rack, etc.

RACK. The plate with a sliding knob or button to fasten the lower end of the cord of a window blind for raising and lowering it.

RACK. The fixture of iron or wood in a stable, wherein the hay is placed for the horses, etc.

**RACK.** A straight bar with teeth or cogs on one side to fit into those of a wheel or pinion.

**RACK.** In mining, an inclined plane on which the ore and slime are washed and separated.

**RACK AND PINION.** A straight bar—the rack—with cogs or teeth fitting into those of the pinion or wheel with teeth or cogs arranged round its circumference.

**RACKING.** The process of separating earthy particles from ore by means of an inclined wooden frame; the act of drawing liquids from the sediment.

**RACKING.** Building brickwork in steps.

**RACK RENT.** Rent raised to the uttermost.

**RADDLE.** A long stick used in hedging; a hedge of interwoven branches.

**RADIAL.** Issuing like a ray.

**RADIAL.** Pertaining to a radius.

**RADIAL CURVES.** Those curves of the spiral kind whose ordinates all terminate in the centre of the including circle and appear like so many semi-diameters.

**RADIANT.** Radiating; emitting, shooting or giving forth rays of light or heat.

**RADIANT.** A straight line proceeding from a given point, about which it revolves.

**RADIATE.** To proceed or issue as rays from a point.

**RADIATION.** Diffusion or divergence from a point, like rays of light or heat.

**RADIATION.** In design, is the spreading out of lines from a common point or from each other.

**RADIATOR.** An apparatus for diffusing heat; a body from which rays emanate.

**RADICAL QUANTITY.** A root.

**RADICAL SIGN.** The sign  $\sqrt{\phantom{x}}$ .

**RADIOMETER.** An instrument for testing the effect of radiation; an instrument for taking altitudes.

**RADIUS.** The semi-diameter or half the diameter of a circle, it being a straight line drawn from the centre to the circumference. The plural of radius is radii.

**RADIUS OF CURVATURE.** The radius of the osculatory circle at any point in a curve.

**RADIUS VECTORS.** Straight lines which express the distances from a point in any curve to either focus of that curve.

**RADIX.** The base of any system of logarithms or numbers.

**RAFFLING.** The notched or serrated edge of foliage in carving.

**RAFF MERCHANT.** A lumber merchant.

**RAFT.** Planks or logs fastened together for transport by floating.

**RAFTED.** Built with rafters; having rafters.

**RAFTERS OR SPARS.** The inclined timbers forming the sides of a roof, one end of them rest on the wall plate and the other on the ridge; also called "common rafters" to distinguish them from the principal rafters of a roof truss.

**RAFTING.** The business of floating rafts.

**RAFTSMAN.** The man who manages a raft during its transport.

**RAG.** A large slate of varying length and breadth, but generally about thirty-six by twenty-four inches; sold by the ton.

**RAG OR TON SLATES.** See Rag.

**RAG BOLT.** An iron bar or bolt enlarged and jagged at the end for the purpose of securing them in stonework; they are usually let into dovetailed holes in the stone, molten lead or brimstone being run in to secure them.

**RAGG.** Any hard irregular rock deposit.

**RAGLET.** A narrow groove about one inch deep cut in masonry to receive the top edge of lead flashing.

**RAGLIN.** Scotch term for a ceiling joist.

**RAGSTONE, RAG OR RAGG.** A dark grey, coarse-grained, silicious sandstone found abundantly in Kent; it is very similar to basalt.

**RAGULED.** In heraldry, jagged or notched.

**RAG WHEEL.** A wheel having a notched or serrated circumference.

**RAG WORK or RAG STONES.** Consists of walls built of rough stones in thin layers resembling tiles.

**RAIL.** A wood or metal bar extending from one support to another, as in fences, railings, etc.

**RAILER.** A handrailer; one who makes handrails for staircases.

**RAIL FENCE.** A fence made of wooden rails.

**RAILING.** A fence of rails, generally applied to one of iron; materials for rails.

**RAILROAD.** A railway.

**RAILS.** The term applied to all horizontal pieces which contain the tenons in a piece of framing, sash, etc.

**RAILWAY CHAIRS.** The pieces of cast iron which fix the rails to the sleepers.

**RAIN CONDUCTOR.** Scotch term for a rain-water pipe.

**RAINFALL.** The amount of rain that falls anywhere.

**RAINGAUGE.** An instrument for measuring the quantity of rain that falls on any space in a stated time.

**RAIN-TIGHT.** Water-tight, or so constructed as to exclude the rain.

**RAIN-WATER.** That which has fallen from the clouds; it contains a small quantity of oxygen, which it acquires as it falls, and also about a quarter of a grain of ammonia salts to a gallon; it is insipid in taste on account of it containing very little gas and scarcely any carbon dioxide in solution; safe to drink if properly collected, but should never be stored or passed through anything containing lead as it dissolves this metal very easily. This term is usually applied to rain-water obtained from a roof, that running off the surface of the ground being called surface water.

**RAIN-WATER PIPE or RAIN CONDUCTOR.** A pipe usually placed against the exterior of a building to carry off the water from the roof.

**RAISE A PURCHASE.** To arrange apparatus so as to exert required mechanical power.

**RAISED or PROJECTING TABLE or TABLET.** That raised or projecting from the naked surface of the wall.

**RAISED PANEL.** One thicker at the centre than round the edges, where they are bevelled off to the thickness required to allow them to fit into the grooves in the styles and rails.

**RAISED PLAN.** A term sometimes applied to an elevation plan.

**RAISING PIECE or PLATE.** A horizontal timber under a beam and over a row of posts or puncheons or quarters.

**RAISING PLATES or TOP PLATES.** Plates or timbers on which a roof is raised, as a pole plate or wall plate.

**RAKE.** To incline from a perpendicular direction.

**RAKE.** To remove the old mortar from the joints of stones or bricks previous to pointing.

**RAKE.** An implement or tool with a long handle and teeth; used for various purposes.

**RAKING.** Sloping, or anything inclined from the perpendicular is said to be raking, or on the rake.

**RAKING AND POINTING.** Consists of removing the original mortar from the joints of stones or bricks to a depth of about three-quarters of an inch and filling in with a superior mortar as required.

**RAKING BOND.** A term applied to diagonal and herring-bone bond.

**RAKING CORNICES.** A term applied to the inclined cornices on the sloping-sides of a pediment.

**RAKING MOULDS or MOULDINGS.** Those inclined from the level or horizontal, as in pediments, etc.

**RAKING PILE.** A pile driven at an angle as a buttress to another pile, or to widen the base of a jetty.

**RAKING SHORE.** A shore which, rising from the ground, is inclined upwards against a building.

**RAKING TABLE or TABLET.** One not perpendicular to the horizon.

**RAM.** A hydraulic engine; the weight of a pile driver; to consolidate loose earth or concrete with a punner or rammer is to "ram".

**RAM.** Disintegrated granite (in Cornwall).

**RAMIFICATION.** The production of figures like branches; division

or separation into branches; the manner of branching; a branch.

**RAMMER.** An instrument for driving, beating or consolidating loose earth or concrete.

**RAMONEUR.** The chimney-sweeper's brush.

**RAMP.** In fortifications, a road cut obliquely into or added to the interior slope of the rampart.

**RAMP.** A sudden rise, concave in form, made by a handrail when it is stopped.

**RAMP.** The concave junction when two mouldings or copings at different levels are joined by a curve of similar section.

**RAMPANT.** In heraldry, said of a lion, etc., standing on the hind legs.

**RAMPANT ARCH.** That in which the abutments or springings are not on the same level; the springing line on one side being higher than that on the other.

**RAMPANT GARDANT.** In heraldry, rampant, with the animal looking full-faced.

**RAMPANT PASSANT.** In heraldry, walking with the dexter fore-paw raised.

**RAMPANT REGARDANT.** In heraldry, rampant, with the animal looking behind.

**RAMPANT SEJANT.** In heraldry, in a sitting posture with the fore-legs raised.

**RAMPANT VAULT.** One that springs from planes not parallel to the horizon.

**RAMPART.** The platform of the wall behind the parapet.

**RAM'S HORN.** In fortifications, semicircular works.

**RANCE.** Scotch term for a prop or shore.

**RANDOM COURSED RUBBLE.** Same as Irregular Squared Rubble.

**RANDOM RUBBLE, UNCOURSED RUBBLE OR ROUGH RUBBLE WORK.** Consists of using stones of all sizes and shapes just as they come from the quarry, without being squared, the bond being obtained by fitting in the inequalities of the stones to each other.

**RANDOM TOOLED STONES.** Those

with their faces tooled without care or regularity; same as drowed work.

**RANGE.** A kitchen grate or cooking apparatus.

**RANGE.** A step in a ladder; a place set apart for shooting practice.

**RANGE OR RANGING.** A term applied to the edges of a number of bodies (generally timbers) when standing or lying in a given plane.

**RANGING BOND.** Consists of narrow horizontal pieces of wood built into the joints of a wall at intervals of about eighteen inches, to form grounds for battening, etc.

**RANK.** Said of pitch pine when coarse and turpy in grain.

**RANK OR RANK SET.** Said of a plane when the back iron is drawn back from the cutting edge to make the plane work coarsely.

**RANSOME'S STONE.** Is an artificial stone made by mixing dried sand with silicate of soda and powdered stone or chalk.

**RAPE.** A division of the county of Sussex.

**RASE.** To level with the ground.

**RASP.** A large rough file; to file with a rasp or a rough file.

**RATCH.** A bar containing angular teeth, into which a pawl or catch drops, to prevent machines from running back.

**RATCHELL.** Loose stones.

**RATCHET.** The bar which stops a ratchet wheel.

**RATCHET BRACE.** A brace with a kind of ratchet wheel; used for boring holes in confined spaces.

**RATCHET WHEEL.** A circular wheel having angular teeth into which a ratchet drops; used for preventing machines from running back.

**RATCHIL.** Fragments of stone.

**RATE.** Price fixed or stated; to value at a certain price.

**RATEPAYER.** One who is assessed to or pays rates.

**RATHOFFITE.** A species of garnet.

**RATIO.** Proportion, as of one thing, such as quantity, to another.

**RATIONAL QUANTITY.** A quantity expressed in finite terms or involving only such roots as can be extracted.

**RAT-TAIL FILE.** A round tapering file of varying sizes.

**RAVELIN.** In fortifications, a detached work with two embankments or faces which make a salient angle.

**RAW.** Not diluted; not subdued by the fire.

**RAW LINSEED OIL.** Is clear and light in colour, works smoothly; should be perfectly transparent, sweet in taste, and almost free from smell; improves with age; used for internal work, delicate tints, and for grinding up colours.

**RAW SIENNA or TERRA DE SIENNA.** A clay stained with oxides of iron and manganese; of a dull yellow colour, durable in oil or water; useful in all work especially graining; not burnt.

**RAW UMBER.** A pigment produced from a clay coloured by oxide of iron; the best comes from Turkey; does not injure other pigments if mixed with them; durable in oil or water; not burnt.

**RAY.** A beam or line of light; a radius.

**RAZE.** To demolish; to lay level with the ground.

**REACTION.** Applied to girders is the resistance of the supports to the pressure by the girder.

**REACTION WATER WHEEL.** A water wheel which is impelled by the reaction of water when thrown off by curved vanes or buckets.

**READING-ROOM.** A room provided with papers, etc., for general reading; the room in a public library in which the newspapers and weekly papers are.

**REAGENT.** A substance used to detect the presence or affect the separation of other bodies.

**REAL.** Pertaining to fixed or permanent things, as land.

**REAL.** A Spanish coin worth 2½d.

**REAL ACTION.** An action which concerns real property.

**REAL ESTATE.** Landed property.

**REALGAR or RED ORPIMENT.** A red pigment; the red sulphuret of arsenic.

**REALITY.** The permanent nature of real property.

**REAM.** 480 sheets of paper, or twenty quires. A printer's ream contains 516 sheets.

**REAMER.** See Rimer.

**REAR VAULT.** A small vault or arch interposed between the tracery or glass of a window and the inner face of the wall.

**REBATE.** A kind of hard free-stone.

**REBATE.** A recess, groove or piece cut longitudinally out of the edge of a board, etc.; pronounced "rabbit".

**REBATE.** Discount; a tool to beat up mortar.

**REBATE.** In heraldry, diminution of bearings.

**REBATED JOINT.** That in which the adjoining pieces are rebated to fit into each other, as in the meeting styles of a pair of doors, etc.

**REBATED AND FILETED JOINT.** Is only applicable to work seen on one side only; it consists of a rebate run along the edges of boards—as flooring boards—and plain wooden slips or fillets fitted into them flush with the surface; chiefly used for flooring boards.

**REBEC, REBECK.** An ancient three-stringed instrument played with a bow.

**REBUILD.** To build or construct what has been demolished.

**REBUS.** In heraldry, a coat of arms which bears an allusion to the name of the person.

**RECALCITRANT.** Refractory.

**RECALCITRATE.** To be refractory.

**RECALCITRATION.** The act of being recalcitrant.

**RECAST.** To mould anew.

**RECEIPT.** Acknowledgment of goods or money received.

**RECEIVER.** A vessel for receiving the products of distillation; a vessel for collecting gas; the bell glass of an air pump.

**RECENT.** Noting a division of the post-tertiary period.

**RECESS.** That part of a room formed by the receding of the wall, as on each side of a chimney breast, etc. A recess may also be formed on the exterior of a building for ornament, etc., as a niche.

**RECESSED ARCH.** That divided into two or more portions or orders and receding one behind the other; an arch within and behind one of a larger radius.

**RECIPROCAL RATIO.** The ratio between the reciprocal of two quantities.

**RECIPROCALLS.** In mathematics, the fraction made by inverting another fraction.

**RECISION.** The act of cutting off.

**RECLAIM.** To recover land from the sea or rivers and bring it under cultivation, etc.

**RECONNAISSANCE.** In surveying, examination or survey preliminary to operations.

**RECTANGLE.** A right-angled parallelogram; a right angle made by the falling of one line perpendicularly upon another.

**RECTANGLED.** Having one or more right angles or angles of 90°.

**RECTANGULAR.** Rectangled.

**RECTIFICATION.** Concentration of a volatile substance for distillation.

**RECTIFICATION.** The reduction of a curve to a right line.

**RECTIFIER.** A revolving form of commutator; is used to convert alternating currents to continuous.

**RECTIFY.** To refine by distillation.

**RECTILINEAL or RECTILINEAR.** A figure whose boundaries consist of right lines; consisting of right lines.

**RECTILINEALLY.** In a straight line.

**RECTORY.** A parsonage house.

**RECURVATE.** Bowed or curved downwards.

**RECURVATION.** Flexure backwards.

**RECURVE.** To bend back.

**RECURVOUS.** Bent backwards.

**RED.** One of the primitive colours.

**REDAN.** In fortifications, a kind of rampart in the form of an inverted V, the apex being outwards; a projection in a wall.

**RED CHALK.** A red clay iron ore.

**RED DEAL** (*Pinus mitis*). Also called red or yellow fir, red pine and red wood. Found in Scotland,

America, Denmark, Norway, Sweden, Lapland, Russia, Prussia and Poland; used principally in the manufacture of joinery.

**REDDLE.** Red chalk.

**RED FIR.** See Northern Pine; same as red deal.

**RED HÆMATITE.** The richest of British iron ore; it yields from fifty to sixty per cent. of iron, the chief impurity being silica; found in many forms, chiefly in globular or kidney-shaped masses of red colour in the carboniferous limestone of Cumberland, Lancashire and Glamorgan-shire.

**RED LATTICE.** A lattice window painted red; formerly the sign of a tavern.

**RED LEAD.** Oxide of lead; used as a pigment; produced by raising massicot to a high temperature, short of fusion, during which it absorbs oxygen from the air. White lead and metallic salts generally destroy its colour, but if ground by itself in oil or varnish it forms a durable pigment; it may be mixed with ochres.

**RED LEAD KNOTTING.** Consists of grinding red lead in water and mixing with strong glue size; used hot, dries in about ten minutes.

**RED MANSFIELD STONE.** A silicious dolomite or magnesian limestone containing a large proportion of silica or sand; suitable for columns, ashlar work, etc.; weathers well in a clear atmosphere; found near Mansfield, Nottinghamshire.

**RED OCHRE.** A natural coloured clay.

**REDOUBT.** In fortifications, a small temporary fort usually without flanking defences.

**REDSEAR.** To break or crack metal when too hot.

**RED-SHORT.** Brittle, or breaking short when red hot, as a metal; also called "hot-short".

**RED-SHORT or HOT-SHORT IRON.** Is chiefly used for tin plate; the defect is chiefly caused by sulphur from the fuel, arsenic, copper and other impurities; produces the same defect of cracking when bent or finished at a red heat; fairly tena-

cious and tougher when cold than any other iron, though useless for welding and many other purposes.

**RED STAIN.** Generally consists of a solution of dragon's blood in spirits of wine.

**REDUCE.** To change from one denomination to another.

**REDUCE (ABSTRACTS).** In "quantity taking," obtaining one total from the different dimensions of work of a similar nature and reducing these totals to the different grades as understood in the trade—*viz.*, to yards superficial by dividing by 9, etc.

**REDUCT.** A quirk or small piece taken out of a larger to make it more uniform or regular; same definition applies in building.

**REDUCTION.** The process of finding an equivalent expression in terms of a different unit.

**RED VITRIOL, VITRIOL OF MARS.** A red sulphate of iron.

**RED WOOD or SEQUISIA.** A Californian timber which grows to an enormous size; coarse grained, soft, easily worked; of a light red colour when first planed but turns to a reddish-brown; not suitable for polishing or painting as the grain is liable to rise.

**REED.** A bead with two quirks, usually two or more being stuck or worked side by side.

**REED.** An aquatic plant with hollow jointed stalk; sometimes used in joinery, etc., to make a joint water-tight.

**REED.** In thatching, straw deprived of its leaves.

**REEDED.** Covered with reeds; having a series of reeds.

**REED FLUSH PANEL.** A flush panel having reeds worked on it.

**RE-EDIFICATION.** The operation of rebuilding.

**RE-EDIFY.** To build again after destruction.

**REEDING or REEDS.** A series of parallel reeds close or joined together.

**REED MOULDING.** A moulding formed by three or more beads or reeds worked side by side.

**REEF.** A chain of rocks in the sea, lying at or near its surface.

**REEMER.** See Rimer.

**RE-ENTRANT ANGLE.** An internal angle.

**REEVE.** To pass the end of a rope through a hole, as in a block, etc.

**REFECTORY.** A dining-room; originally, a hall in monasteries for dining in; a refreshment room.

**REFINE.** To purify, as liquors, metals, etc.

**REFINED.** Freed from impurities.

**REFINERY.** A place and apparatus for refining.

**REFINING PIG IRON.** Consists in keeping it in a state of fusion on an open hearth with coke for about two hours, a strong current of air being directed upon it and well stirred.

**REFLECT.** To throw back light, heat, etc.

**REFLECTED.** Light or heat thrown back from what it strikes directly on.

**REFLECTING.** Throwing back light or heat.

**REFLECTION.** The state of being reflected; the act of reflecting.

**REFLECTOR.** A polished surface reflecting light or heat.

**REFLEX.** Bent back or reflected.

**REFLOW.** To flow back.

**REFLUCTION.** A flowing back.

**REFLUENT.** Flowing back.

**REFLUX.** A flowing back.

**REFORMATORY.** An institution for the detention and reformation of young criminals.

**REFRACT.** To break the natural course of a ray of light or heat.

**REFRACTED.** Bent back at an acute angle; turned from a direct course.

**REFRACTION.** The change in the direction of a ray of light or heat as it passes through a smooth surface into a medium of a different density.

**REFRACTION.** In mechanics, the incurvation or change of determination in the body moved.

**REFRACTORINESS.** Difficulty of fusion or of yielding to the hammer.

**REFRACTORY.** Difficult of fusion; sometimes applied to clay, bricks or stone capable of standing a great heat.

**REFRESHMENT BAR.** A bar or apartment for partaking light refreshments in.

**REFRIGERANT.** Cooling; allaying heat.

**REFRIGERATE.** To keep cool, as in a refrigerator.

**REFRIGERATION.** The act of cooling or allaying heat; the state of being cooled.

**REFRIGERATIVE, REFRIGERANT.** A refrigerant.

**REFRIGERATOR.** An apparatus or a building provided with an apparatus for making or keeping provisions cool.

**REFULGENT.** Casting a bright light.

**REFUSE.** Waste or useless matter; that which is refused or rejected.

**REFUSES.** Said of a pile when it will not go deeper by driving.

**REGARDANT.** In heraldry, said of a lion, etc., looking behind or backwards.

**REGELA.** The space between two adjoining canals of a triglyph; a short fillet beneath the triglyph and having six guttæ depending from it.

**REGELATION.** The union by freezing together of two pieces of ice, with moist surfaces, when placed in contact at a temperature of 32°.

**REGISTER.** An apparatus for regulating the admission of air, heat, etc.

**REGISTER.** A hinged door leading to the chimney on a fire grate.

**REGISTER GRATE.** A fire grate with a register.

**REGIUS PROFESSORS.** Those professors in the English universities whose chairs were founded by Henry VIII.; professors whose chairs were founded by the Crown.

**REGLET.** A flat, narrow moulding used to separate other members, etc.

**REGRATE.** To scrape and freshen the dirty walls of a building; to redress; also applied to old hewn stone.

**REGRATING.** The act or process of scraping off the surface of old hewn stone to give it a fresh appearance.

**REGRATING OR SKINNING.** Among masons, the process of removing the surface of an old hewn stone to whiten it and make it look fresh.

**REGULAR.** Having the sides and angles equal; symmetrical.

**REGULAR ARCHITECTURE.** That having its parts symmetrical, or disposed in counterparts.

**REGULAR BODY.** A solid whose surface is composed of regular and equal figures and equal solid angles.

**REGULAR COURSED RUBBLE.** Consists of a sufficient number of stones being obtained of a uniform depth to allow of their being laid in regular courses in depth.

**REGULAR CURVES.** The perimeters of conic sections which are always curved after the same geometrical manner.

**REGULAR PENTAGON.** That having five equal angles and five equal sides.

**REGULAR PYRAMID.** That whose base is a regular figure and the perpendicular from its vertex passes through the centre of its base, *i.e.*, of a circle that may be described about its base.

**REGULATOR.** Any part of a machine or apparatus which regulates its movements.

**REGULATOR.** A device for altering the resistance, and therefore power, of a circuit at will.

**REGULATOR VALVE.** A valve in a water-closet apparatus for regulating the supply of water; a valve in a steam pipe for regulating the supply of steam.

**REGULUS.** The pure metal which, in melting ores, falls to the bottom of the crucible.

**REIGLE.** A hollow cut or channel for guiding anything.

**REINS.** The springing stones of an arch.

**REINS OF A VAULT.** The sides or walls that sustain the arch.

**REJOINT.** Pointing; to fill up old joints of walls with fresh mortar.

**REJOINTING.** The filling up of the joints of stones in which the mortar has been dislodged. Same as Pointing.

**RELAIS.** In fortifications, a narrow walk without the rampart.

**RELATION.** Ratio; proportion.

**RELAY.** In electricity, a device placed in series with a main circuit, which when "excited" brings into action a local circuit which may be quite separate from the main circuit. It is used in telephony, telegraphy and bell work, and may be looked upon as a kind of an automatic, electro-magnetic switch.

**RELIEF.** Prominence or projection given to sculpture and carving beyond the ground or plane on which it is formed.

**RELIEVING ARCH.** An arch formed over a lintel to relieve it of the weight above; called a "saving" or "safety" arch in Scotland.

**RELIEVO.** Relief; prominence of figures in sculpture, etc.

**RELIGIOUS HOUSE.** A house for monks or nuns; a monastery; a convent.

**RELIQUARY.** A depository for relics; a casket in which they are kept.

**RELIQUE.** Fossil remains.

**REMAINDER.** That which is left over after subtraction.

**REMAINDER.** An estate limited to take effect and be enjoyed after another estate is determined.

**REMAINDER MAN.** One who has an estate after a particular estate is determined.

**REMBLAI.** In fortifications, the materials used or thrown up to form a rampart.

**REMOLTEN.** Melted again.

**REMOULD.** To shape anew.

**REMOVE.** A step in a scale of gradation.

**RENAISSANCE.** The revival of arts and letters in the fifteenth century; a style of architecture, based on classical forms, which came into existence in Italy early in the fifteenth century; the classic style of decoration revived by Raphael (1483-1520).

**RENAISSANCE.** A style of architecture which succeeded the Gothic.

**RENDER.** To give the first coat of plaster to.

**RENDERING.** The first coat of

plaster or cement on walls; when a second coat is applied it becomes two coat work, or render and set; when the work is floated it becomes three coat work, or render, float and set.

**RENITENCE or RENITENCY.** The resistance of a body to pressure; the effect of elasticity.

**RENITENT.** Resisting pressure or the effect of it.

**RENOVATE.** To restore; to renew; to repair after decay, etc.

**RENOVATION.** The act of renovating; a state of being renovated.

**RENT.** A sum of money payable periodically for the use of lands, tenements, etc.

**RENTAL.** Rent; the total rents of an estate.

**RENT DAY.** The day on which rent is due.

**RENTIER.** One who holds an estate or tenement by paying rent.

**RENTIER.** To restore the design in damaged tapestry.

**RENT ROLL.** A list of rents or income.

**RENVERSE.** In heraldry; with the head downwards.

**REPAIR.** To rebuild a part decayed; to restore.

**REPEATING CIRCLE.** A mathematical instrument for diminishing the effects of errors of graduation.

**REPERCUSSION.** In mechanics, the act of driving or drawing back; rebound.

**REPLACEMENT.** The removal of an angle or an edge.

**REPLICA.** A copy of a picture, sculpture, etc., by the artist who executed the original.

**REPLUM.** The rails of a door, or the panel of the impagis.

**REPOSE, ANGLE OF.** See Angle of Repose.

**REPOSITORY.** A warehouse; a shop; a place where things are deposited for safety or preservation.

**REPOUSSÉ.** Embossed by hammering from behind and afterwards by chasing.

**REPPRESSED BRICK.** A soft mud brick, which, after being partially dried, has been subjected to an enormous pressure.

**REPRISE or REPRISAL.** In Scotland, same as stool.

**REREDOS.** The wall or screen at the back of an altar; the screen in front of the choir; a screen at the back of a seat; the back of a fireplace.

**RESERVOIR.** A place where water is collected and kept for use.

**RESIDENCE.** A dwelling house of some pretension.

**RESIDENTIARY.** An ecclesiastic who keeps a certain residence.

**RESIDUUM.** What is left after any process of separation or purification.

**RESILE.** To start, or rebound, back.

**RESILIENCE.** The act of springing back or rebounding; the power of a beam, etc., to resist a shock or blow; the quantity of work done in deforming a piece of material (up to the elastic limit) by the application of any kind of stress.

**RESILIENT.** Starting back; rebounding.

**RESILITION.** Act of springing back.

**RESIN or COLOPHONY.** Is either white or brown; the white is distilled from Bordeaux turpentine, the brown being produced by distilling the turpentine of spruce fir in water.

**RESIN EXTRACTIVE.** Extractive matter in which resin predominates.

**RESINIFEROUS.** Yielding resin.

**RESINIFORM.** In the form of resin.

**RESINO-ELECTRIC.** That produced by the friction of resinous substances; having or exhibiting negative electricity.

**RESINOUS.** Said of pitch pine when coarse and turpy; partaking of the qualities of resin.

**RESINOUS ELECTRICITY.** That excited by the friction of resinous substances.

**RESISTANCE.** The opposition that a current meets in traversing a conductor; the power of a body which acts in opposition to the impulse or pressure of another, or which prevents the effect of another power.

**RESISTANCE.** In electricity, is that quality common to all conductors which opposes the flow of current. E.M.F. is expended, or rather lost in overcoming resistance. It varies with the kind of conductor, its molecular structure, etc. Drawing, rolling, strain and compression alike affect the resistance of a conductor.

**RESISTANT.** That which resists.

**RESOLUBLE.** That which may be melted or dissolved.

**RESOLUTION OF FORCES.** In mechanics, the dividing of a force into two or more, which would have the same effect.

**RESOLUTION OF AN EQUATION.** The operation for finding the value of the unknown quantity.

**RESOUND.** To send back sound, as metal, etc., when struck, or a floor when walked upon.

**RESPOND.** A half column, pier or pillar attached to a wall to support an arch and from which it springs.

**RESSANT LORYMER, SCROLL or EDGE MOULDING.** A roll moulding with a slight edge at one part.

**RESSAULT.** The recess or projection of a member, from or before another, so as to be out of the line or range with it.

**RESSAUNT.** An old term for an ogee moulding.

**REST.** In mechanics, etc., cessation from motion or action of any kind.

**REST.** In Scotland, the wall hold, or distance which the end of a beam, etc., goes into a wall.

**RESTAURANT.** An establishment providing light refreshments.

**RESTEM.** To force back, as a current.

**REST LEVEL.** The normal level of water in a well.

**RESTORATION.** The act of repairing or renewing work fallen into decay; rebuilding.

**RESTORE.** To rebuild; to repair.

**RESULTANT.** The effect of two or more forces acting in different directions.

**RESURVEY.** A second survey.

**RET.** To destroy cohesion among the fibres of flax or hemp by retting.

**RETABLE.** Decorative work fixed to the wall over the altar.

**RETAIL.** To sell in small quantities.

**RETAINING WALL.** A wall for sustaining the pressure of the earth or water deposited behind it after it is built.

**RETARD.** In mechanics, to diminish the velocity.

**RETICIOUS.** Resembling network, as masonry, etc.

**RETICULATED WORK.** Masonry constructed of small square stones placed diagonally; rubble work built with stones placed angularly to present the appearance of network.

**RETINALITE.** A mineral of compact texture and splintery fracture.

**RETINITE.** Pitch stone.

**RETIRADE.** In fortifications, a retrenchment made of two faces, forming a re-entrant angle.

**RETORT.** To bend or curve back.

**RETORT.** Generally a glass vessel used in distilling and decomposing substances.

**RETRACE.** To renew the outline, as of a drawing, etc.; a second tracing.

**RETRENCHMENT.** A work constructed within or behind another to prolong a defence.

**RETROCHOIR.** Any extension of a church behind the altar.

**RETROGRESSIVE FLIGHT.** A return flight of stairs.

**RETTY.** A place where flax is "retted".

**RETTING.** The act or process of steeping flax or hemp to loosen the fibre from the woody portions.

**RETURN.** The continuation of a moulding, projection, etc., in an opposite direction (generally at right angles), as round an external angle. When two surfaces join each other at an angle, one is said to "return" in respect of the other.

**RETURN.** The pipe, in hot water heating, by which the water enters the boiler; anything returning or departing from the straight work.

**RETURN BEAD.** A bead, nearly circular in form, usually worked on

the angles of stuff, thus,



**RETURNED END.** The termination of a moulding, side of a carcase, the cheek of a dresser, etc., returning and stopping against the general plane, as a wall, etc.

**RETURNED IN ITSELF.** Said of anything returned in the solid, i.e., the return is formed in the material without any addition.

**RETURN FLIGHT** or **RETROGRESSIVE FLIGHT.** In staircasing, a flight returning in a direction opposite to the bottom flight.

**RETUSE.** Terminating in a round end and having a depression in the centre.

**REVEAL.** The vertical side of an opening for a window, doorway, etc., for the reception of the frame. Formerly spelt "revel".

**REVERBERANT.** Resounding; reverberating.

**REVERBERATE.** To send or strike back or reflect, as light, heat or flame.

**REVERBERATION.** The act of sending back or reverberating, as light, heat or sound.

**REVERBERATORY FURNACE.** A furnace with a kind of dome that reflects the flame upon the material or vessel placed within it.

**REVERSE SPRING.** A spring used in bell-hanging for drawing back the handle of a bell pull.

**REVERSIBLE SASH FITTINGS.** Those which enable sashes to be turned with the outside inside for cleaning purposes.

**REVERSION.** A right of property which remains after some particular estate has ceased.

**REVESTIARY.** The vestry of a church or temple.

**REVETMENT.** A term applied by military men to a retaining wall.

**REVETMENT.** In fortifications, a strong wall on the outside of a rampart.

**REVIVE.** To recover or to restore its natural or metallic state.

**REVOLUTION.** In geometry, the motion of a point or line about a centre ; the motion of a body round a centre or on its axis.

**REVOLVING SHUTTER.** A shutter generally composed of narrow strips of iron so connected that when not in use it can be coiled or rolled round or into a cylinder ; generally used for shop windows.

**RHABDOMANCY.** The divination, by means of rods, to find the locality of minerals, springs, etc., underground.

**RHEOMETER.** An instrument for measuring the strength of an electric current.

**RHEOMETRY.** The art of measuring the strength and velocity of electric currents.

**RHEOMOTOR.** An apparatus by which an electric or galvanic current is originated.

**RHEOPHORE.** A connecting electric wire.

**RHEOSCOPE.** An instrument to determine the pressure or presence of an electric current.

**RHEOSTAT.** An instrument for regulating an electric current.

**RHEOTOME.** An instrument for interrupting an electric current.

**RHEOTROPE.** An instrument for changing the direction of an electric current.

**RHIND or RUND.** In Scotland, applied to the rung of a ladder.

**RHODANIC.** Producing ; or a red colour produced with salts of iron.

**RHODIAN PERISTYLIUM.** A building, court, etc., having a colonnade on each of the four sides, that on the south side being higher than the rest.

**RHODIUM.** A hard, brittle metal belonging to the platinum group.

**RHODONITE.** A variety of manganese spar.

**RHOMB or RHOMBUS.** An oblique-angled equilateral parallelogram.

**RHOMBIC.** Having the figure of a rhomb.

**RHOMBOHEDRON.** A solid contained by six equal rhombic planes.

**RHOMBOID.** A quadrilateral figure whose opposite sides and angles are equal, but which is neither equilateral nor equiangular.

**RHOMBOIDAL.** Having or approaching the shape of a rhomboid.

**RHOMB SPAR.** A mineral resembling calc spar ; consisting chiefly of carbonates of lime and magnesia.

**RHONE.** In Scotland, a rain-water pipe or an eaves gutter.

**RIB.** A projecting band in a ceiling ; a carved piece of timber for supporting the lath and plaster work of a vault ; projecting bands of masonry underneath a vaulted roof ; the curved pieces, in a wood centre, to which the laggings are nailed ; the principal curved pieces of a dome, turret, etc. ; a moulding on the interior of a vaulted roof.

**RIB or PANEL VAULTING.** That composed of a framework of light stone ribs supporting thin panels.

**RIBBAND.** Pieces of timber nailed to the timbers of a square body under which shores are fixed.

**RIBBED.** Having ribs ; marked with rising lines and channels.

**RIBBED PLATE GLASS.** That marked with rising lines and channels ; made of coarser materials than "polished plate" ; chiefly used in factories, etc.

**RIBBING.** A series of ribs, or an assemblage of ribs, as for a vaulted or coved ceiling.

**RICH LIME.** A fat or pure lime ; very soluble ; chiefly used for plastering and whitewashing ; calcined from the upper chalk marble or other beds containing 90 or 100 per cent. of carbonate of lime ; slakes freely, and swells to about three times its original bulk.

**RICKERS.** Small trees, standards or scaffold poles, about twenty-two feet long and less than two and a half inches in diameter at the top end.

**RIDDLE.** A large sieve with meshes for separating materials for mortar, etc.

**RIDDLING.** That deposited by a riddle, or by sifting, as through a sieve.

**RIDDLINGS.** The middle size of broken ore obtained by sifting.

**RIDER.** A strap with an eye at the end for fitting over the hook in a sharp hinge.

**RIDGE.** The horizontal piece of timber running along the apex of a roof and which supports the heads of the rafters; the line formed by the meeting of the pitches or sides of a roof at the apex.

**RIDGE COURSE.** The row or course of slating next the ridge of a roof.

**RIDGE PIECE OR RIDGE BOARD.** A ridge, or the horizontal timber along the apex of a roof and which supports the upper ends of the rafters.

**RIDGE POLE.** In Scotland, a term applied to a ridge roll.

**RIDGE ROLL.** A wood roll dressed round with lead and fixed on a ridge.

**RIDGE SCARFING.** The scarf joint in a ridge to make up the required length out of two or more pieces; the act or method of scarfing a ridge.

**RIDGE SLATES.** Slates laid along the ridge of a building.

**RIDGE STONE.** In masonry, the last stone in the gable end of a building, of a triangular form, thus, ▲; same as an apex stone.

**RIDGE TILE.** A tile shaped thus, ▲; for covering the ridge of a roof.

**RIDGY.** Rising in a ridge or ridges.

**RIDING.** One of the three divisions of Yorkshire.

**RIDING SCHOOL.** A place where the art of riding is taught.

**RIDING SHORE.** One which rises from the back of a lower raking shore of the same series, the timber not being long enough to go right down to the ground.

**RIFFLE.** An inclined trough having depressions in the bottom for arresting the particles of auriferous slime or sand.

**RIFFLER.** A file with a convex end for working in shallow depressions.

**RIFT.** A fissure; a cleft; to split.

**RIGA DEAL.** Is very free from sap, straight in grain, strong, tough, easily worked, very durable if well seasoned; adapted for joists, wall plates, roof timbers, etc.

**RIGA OAK.** Is obtained from Russia; it is similar to Dantzic, but the medullary rays are more numerous and more distinctly marked. It is nearly all shipped as wainscot stuff, and is imported in the form of flitches or logs of a nearly semi-circular section.

**RIGA TIMBER.** The quality marks on Riga timber are:—

△ = Best middling.

✕ = Good middling.

⊗ = Common middling.

**RIGATION.** The act of watering.

**RIGA WHITE DEALS.** Are coarser and more open grained than the other Russian kinds.

**RIGGER.** A cylindrical pulley or drum.

**RIGHT ANGLE.** An angle of 90°, or one-fourth part of a circle.

**RIGHT ANGLED.** Having a right angle.

**RIGHT ARCH.** A cylindrical arch, either circular or elliptical, terminated by two planes at right angles to the axis.

**RIGHT CIRCLE.** One drawn at right angles with the plane of projection.

**RIGHT HANDED.** Said of anything made to open to the right hand.

**RIGHT HAND LOCK.** A lock having the bolt on the right when the lock is looked at from the side which will be applied to the door in fixing.

**RIGHT LINE.** A line perfectly straight.

**RIGID.** Stiff; not pliant or easily bent.

**RIGIDITY OR STIFFNESS.** Expresses the disinclination of some bodies to alter their form under stress; it is thus the reverse of pliability; resistance to change of form.

**RIGOL.** A circle.

**RILL.** A small brook.

**RIM.** A border or margin.

**RIME.** To enlarge a hole with a "rimer"; the rung of a ladder.

**RIMER.** A tool for enlarging a hole.

**RIM LOCKS.** Are so called from the metal used in their casing and the rim which fits round and is screwed to the edge of the door; fixed on the side of a door, the bolt or bolts shooting into a box staple fixed on the door jamb; the size is specified by the length of the case.

**RIM OF A DRAWER.** The back and sides.

**RIMOSE OR RIMOUS.** Abounding with clefts or cracks, as the bark of trees, etc.

**RIND GALLS.** In timber, consists of peculiar, curved swellings caused chiefly by the growth of layers over the wound remaining after a branch has been carelessly lopped off.

**RINDLE.** A small water-course or gutter.

**RING.** The sound of a brick, slate, metal, etc., when struck; anything in the form of a circle or hoop.

**RING BOLT.** An iron bolt having a ring in one end of it.

**RING COURSE.** A course of bricks or stones parallel to the face of an arch; the stones or bricks between two consecutive series of heading joints.

**RING FENCE.** A fence encircling an estate.

**RINGING.** The act of sounding when struck as a bell, metal, etc.

**RINGING ENGINE.** A small pile-driving apparatus in which the ram or monkey is raised by hand power directly applied.

**RINGLET.** A small ring or circle.

**RING SHAKES OR CUP SHAKES.** In timber, are caused by two or more of the annual rings failing to unite together.

**RINGSTONES.** Same as Voussoirs or Arch Stones.

**RING STREAKED.** Having circular streaks or lines.

**RINK.** A prepared floor on which to skate with roller skates.

**RINMAN'S GREEN.** A pigment composed of cobalt and ferrous oxide of zinc.

**RIP.** To saw wood with the grain, *i.e.*, in the direction of the

grain. To saw across the grain is called "cross-cut".

**RIPARIAN.** Pertaining to the bank of a river.

**RIPE.** To rake out; the tool used for raking out.

**RIPPER OR RIP SAW.** A hand saw having eight teeth in three inches; used by joiners for ripping wood with the grain only.

**RIPPER.** A thin blade of iron about twenty-four inches long and two inches wide, enlarged and rounded at the head which has a notch each side for drawing nails; chiefly used for taking off damaged slates, the nails being drawn by inserting the ripper under the slate.

**RIPPING.** A term used for sawing wood with the grain.

**RIPPING CUT.** When planks or boards are sawn longitudinally through their thickness the saw cut is known as the "ripping cut".

**RIPPLE MARK.** Small undulations left by the receding waves on the surface of rocks or on the beach.

**RIPRAP.** Stones laid without mortar; used at the base of piers, etc.; a loose foundation of stones in deep water on a soft bottom.

**RISE.** The vertical distance, in circular work, from the springing to the crown; in stairs, the vertical height between two treads or steps; the height of a roof from the eaves to the ridge; the vertical height of an arch from the springing to the crown.

**RISE.** Any difference in vertical height in surveying.

**RISER.** The vertical portion of a step; the vertical board between two treads of a stair.

**RISING BUTT.** A door hinge turning upon a screw or helical joint to allow a door to fit close down to the floor when shut but rising as it opens.

**RISING MAIN.** The water pipe leading from a lift and force pump.

**RITT.** In quarrying, a groove cut with a pick.

**RIVAGE.** A bank, shore or coast.

**RIVER BED OR CHANNEL.** The bottom of a river.

**RIVER COURSE.** The course of a river.

**RIVER SAND.** Is not so sharp or angular in its grit as pit sand, the grains having been rounded and polished by attrition.

**RIVER WATER.** The drainage of the surface of the hills and high ground, running in a shallow stream or in a deep cut channel; far more pure than spring water on account of the quantity of oxygen it absorbs during its course; generally polluted by the towns or villages upon its banks.

**RIVET.** A short bolt of wrought iron, copper or brass, secured by being clinched at both ends by hammering; used for fastening sheets of metal together.

**RIX DOLLAR.** A name for several silver continental coins of value from 2s. 6d. to 4s. 6d.

**ROACH PORTLAND STONE.** A term applied to Portland stone got from the uppermost bed in the quarry; largely used for exterior work on account of its weathering properties.

**ROAD.** An artificially formed way for vehicular traffic.

**ROAD BED.** The bed or foundation on which the superstructure of a railroad rests.

**ROADMAN.** One who keeps a road in repair.

**ROAD METAL.** The small broken stones used to form macadamised roads.

**ROADWAY.** The part of a road used by vehicles.

**ROAN TREE.** The mountain ash.

**ROAST.** To dissipate the volatile parts of ore by heat.

**ROASTER.** A ventilated oven in a kitchen range for roasting meat.

**ROBOREOUS.** Made of oak.

**ROCHET.** A kind of surplice open at the sides; worn by bishops.

**ROCK.** Any mineral deposit; a large mass of stony matter bedded in the earth or deposited on it.

**ROCK BASIN.** A cavity or artificial basin cut in a rock.

**ROCK CORK.** A variety of rock of limestone found under chalk in various parts of England.

**ROCK ELM** (*Ulmus racemosa*). Is grown in North America and im-

ported chiefly from Canada; it is tough, flexible, fine smooth grain, free from knots and sap, durable under water but subject to shakes if exposed to sun and wind; of a whitish-brown colour and close annular rings.

**ROCKERY.** A pile of earth and rocks, or large irregular stones, for plants growing on.

**ROCK OIL.** Petroleum.

**ROCK SOAP.** A soft greasy mineral consisting of silica, alumina and peroxide of iron; used for crayons.

**ROCK TEMPLE.** A temple hewn out of the solid rock.

**ROCK WOOD.** Ligniform asbestos.

**ROCK WORK.** Masonry in imitation of the asperities of rocks; a rockery.

**Rococo.** A debased variety of the Louis XV. style of ornament; bad taste in design or decoration; distinguished by a superfluity of confused detail.

**ROD or POLE.** A measure of sixteen and a half lineal feet, or a square measure of  $272\frac{1}{4}$  square feet.

**ROD.** An implement about five yards long for measuring.

**ROD.** In joinery, a board or stiff lath on which the sizes of windows, doors, etc., are set out.

**ROD.** In brickwork,  $272\frac{1}{4}$  square feet, one brick and a half thick.

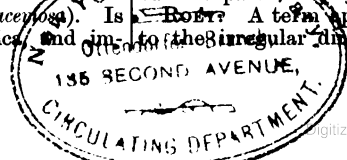
**ROD BOLT.** Similar to a barrel bolt, the bolt sliding through three short cylinders instead of one continuous cylinder as in a barrel bolt.

**ROD IRON or ROD STEEL.** Round wrought iron, three-eighths of an inch or less in diameter; generally described according to size, as three-eighths rod iron or one-quarter rod, etc.

**ROD OF REDUCED BRICKWORK.**  $272\frac{1}{4}$  square feet, one brick and a half thick; so called because all thicknesses of brickwork are reduced to an equivalent quantity of one and a half brick thick.

**ROE STONE or OOLITE.** A kind of limestone found under chalk in various parts of England.

**ROOF.** A term applied in timber to the irregular direction or over-



lapping of the grain of the wood, as in mahogany.

**ROLL.** A cylinder of wood about two inches or so in diameter; used to dress the lead over where the sheets join, as in a lead flat.

**ROLL.** A hollow roll is made with lead alone; a "roll cap" is used to cover the edge of adjoining sheets in zinc flats.

**ROLL AND FILLET MOULDING.** A roll moulding with a fillet.

**ROLL CAP.** In zinc flats, one used to cover the edges of adjoining sheets.

**ROLL COVER.** A narrow strip of lead dressed over a rounded edge and covered by the larger sheet.

**ROLLED IRON or STEEL.** Wrought iron or steel in the form in which it leaves the rolling mills. The term is generally applied to bars of **H**, **T** or **L** section.

**ROLLED IRON JOIST.** A wrought iron joist of **I** section.

**ROLLED PLATE GLASS.** Or rough rolled plate, or Hartley's patent rough or rolled plate, is glass of a wavy description, smooth on one side, the other being marked with parallel ridge lines or with flutes.

**ROLLERS or ROLLS.** Plain cylinders of wood from four to eight inches in diameter, and from two to four feet long; used for moving large stones, etc.; a cylinder of stone, metal or wood for rolling, etc.

**ROLLING MILL.** Machinery for rolling out heated metal.

**ROLLING STOCK.** The locomotives, carriages, waggons, etc., of a railway.

**ROLLING WAY.** An inclined plane down which barrels may be lowered or rolled.

**ROLL MOULDING.** A moulding resembling a roll, or one composed of two quarter cylinders, the upper slightly overlapping the one under; used in Early English architecture.

**ROMAN or LATIN CROSS.** That having the stem longer than the arms or cross piece, thus, **†**.

**ROMAN CEMENT.** A dark brown, quick-setting cement produced by calcining a natural stone.

**ROMANESQUE.** A general term

for all the debased styles of architecture which succeeded the Roman and lasted till the introduction of Gothic.

**ROMANESQUE ARCHITECTURE.** That which prevailed after the fall of the Roman empire, from the reign of Constantine till the introduction of the pointed arch.

**ROMAN LAKE.** A pigment produced from cochineal.

**ROMAN OCHRE.** A fine clay naturally coloured with oxides of iron and manganese.

**ROMANTICISM.** Applied to the reaction from classical to mediæval forms which originated in Germany about the middle of the eighteenth century.

**ROMEINE.** A mineral consisting of antimony and lime.

**ROMPU.** In heraldry, an ordinary that is broken, or a chevron or bend whose upper points are cut off.

**RONDELS or ROUNDELS.** Small circular crowns of glass ranging in diameter from one inch to one foot.

**RONDLE.** In fortifications, a small round tower erected at the foot of a bastion.

**ROOD.** In Scotland, thirty-six square yards.

**ROOD or ROODE.** A figure of the cross, and generally of the crucifix.

**ROOD.** In long measure, five and a half yards or sixteen and a half feet; in square measure, the fourth part of an acre; a rod or pole.

**ROOD LOFT.** A gallery generally over the chancel screen in a church.

**ROOD TOWER or STEEPLE.** A tower or steeple at the intersection of the nave and transept of a church.

**ROOF.** The covering of a building; a vault or arch in the interior.

**ROOF BOARDING.** Rough boarding on which the roof covering is laid.

**ROOFING.** The act or method of putting on a roof; the assemblage of timbers in a roof.

**ROOFLET.** A little roof.

**ROOF LIGHT.** In Scotland, a skylight.

**ROOF TREE.** A roof beam; a roof.

**ROOFY.** Having roofs.

**ROOM.** Space unoccupied, as the clearance given to a door, drawer, etc.; an apartment.

**ROOT.** The quantity which, multiplied by itself, produces the given quantity.

**ROOT.** That part of a tenon adjoining the shoulder.

**ROPE.** A thick cord of several strands of twisted hemp or wire.

**ROPERY.** A rope walk.

**ROPE WALK.** A long covered walk where ropes are made.

**ROPY.** Stringy; adhesive.

**ROSANILINE.** A red dye occurring in commerce under the names of aniline red, magenta, etc.

**ROSARY.** A rose-garden; a garland; a chaplet.

**ROSE or ROSETTE.** A circular ornament used in architectural decoration; in joinery, a small turned circular ornament planted on newels, etc.

**ROSE.** A perforated nozzle on the end of a hose pipe, syringe or watering-pot.

**ROSE.** The circular metal plate under the knob of a door.

**ROSE.** A perforated hollow ball at the bottom of the suction pipe in a pump.

**ROSE BIT.** A joiner's bit for countersinking holes for the reception of the head of a screw.

**ROSE CLENCH NAILS.** Are generally used for packing cases, etc.; they are square ended and can be easily punched through thin metal without first boring holes.

**ROSE FLAT POINTS.** Are nails, classed as "fine" or "strong," having chisel points, which are placed with the flat point along the grain to prevent splitting and to increase their holding power.

**ROSELITE.** A native arseniate of cobalt.

**ROSE MOULDING.** A mediæval moulding with ornaments resembling roses.

**ROSE NAIL.** That with its head projecting over the shank on all its sides.

**ROSE NAILS.** Derive their name from the shape of their heads, they

are either wrought, cut or pressed; divided into classes according to the nature of their points.

**ROSENDALE CEMENT.** A light and quick-setting hydraulic cement about half the ultimate strength of Portland cement; derives its name from Rosendale, Ulster Co., N.Y., where it was first made, about 1837.

**ROSE NOBLE.** An old English gold coin with the impression of a rose, worth 6s. 8d.

**ROSE PINK.** A chalk or whiting stained with a tincture of Brazil wood; used for common distemper paperhangings, staining cheap furniture, etc.; fades very soon.

**ROSE QUARTZ.** A rose-red variety of quartz.

**ROSE SHARP POINTS.** Rose nails; generally used for fencing or common work where hard wood is used; classed according to their stoutness, as "fine" (or Canada) and "strong"; of both wrought and stamped varieties.

**ROSETTA STONE.** A stone found at Rosetta in Egypt, by which archaeologists found the key to Egyptian hieroglyphics.

**ROSETTA WOOD.** An Indian wood of a bright orange-red colour with dark veins.

**ROSETTE.** An ornament in the form of a rose; a patera.

**ROSE WINDOW.** A circular window filled in with tracery, differing from a "wheel window" in that the mullions do not radiate from the centre.

**ROSE WOOD.** A fancy wood of a light hazel, deep purple or nearly black colour; imported from Brazil, Africa, East Indies and the Canary Islands in large slabs or flitches.

**ROSIN.** Common resin; obtained by distilling crude turpentine.

**ROSLAND.** Heathy or moorish land.

**ROSTRUM.** An elevated platform of more or less pretension; used as a pulpit in chapels; a platform in a hall.

**ROT.** In timber, decomposition or putrefaction generally caused by damp or want of ventilation.

**ROTARY.** Turning like a wheel.

**ROTARY MOTION.** The rotation or motion of a body round an axis or centre.

**ROTATE.** To revolve round a centre.

**ROTATION.** The act or method of a body turning, as a wheel.

**ROTTEN.** In plumbing, means that an excess of "flux" has been used in soldering.

**ROTTEN ROAD.** That in which the binding material has not sufficient cohesive properties to retain the mutual, *i.e.*, broken stones in position, and is liable during watering or heavy rains to be washed to the bottom of the metal coating from which it cannot be recovered.

**ROTTEN-STONE.** A soft stone used in polishing metals or marble, etc.

**ROTUND.** Spherical; round.

**ROTUNDA.** Any building that is round both inside and out.

**ROTUNDITY.** Roundness; sphericity.

**ROUBLE.** The Russian monetary unit; the silver rouble is worth about 2s. 10d.

**ROUGH.** Not polished; not planed; not smooth.

**ROUGH ARCH.** That in which the bricks are not cut.

**ROUGH ASHLAR.** A term applied to nearly all squared stone masonry.

**ROUGH BRACKET.** In staircasing, a rough bracket secured to the carriage and supporting the tread.

**ROUGH CAST.** Called "harl," or "dashing" in Scotland. Coarse plastering formed by mixing clean gravel or sharp grit with cement; sometimes the cement is put on first and the gravel thrown or dashed against it; used in half-timbered work, etc.

**ROUGH COURSE STUFF.** In plastering, is made of two parts sand to one part of lime; generally used for first and second coat of plastering to walls and ceilings.

**ROUGH CUT ARCHES.** See Axed Arches.

**ROUGH CUTTING.** In brickwork, cutting done with the axe or the trowel, to be built against or rendered over.

**ROUGH DRAUGHT.** A rough sketch.

**ROUGH DRAWING PAPER.** That generally used for very bold drawing and sketching.

**ROUGH-HEW.** To hew coarsely; to give the first form or shape to, as stones.

**ROUGH-HEWN.** Uneven; rugged; unpolished.

**ROUGH PLATE GLASS.** Or "rough cast plate," is that cast on a flat table and rolled into a sheet of the required size and thickness by a heavy iron roller.

**ROUGH POINTED STONE.** That having an inch or more removed from the face of a stone with a pick or heavy point until the projections vary from half an inch to one inch thick.

**ROUGH STOCKS.** Bricks rough in shape and colour; often used in foundations.

**ROUGH STRING.** In staircasing, a carriage for a stair.

**ROUGH STUCCO.** Plastering in imitation of stone.

**ROUGH WALLING.** Rubble walling; also applied to any rough walling whether brick or stone.

**ROUND.** A joiner's plane for making hollows, etc.

**ROUND.** A torus moulding; a bead; a sphere or cylinder; convex; cylindrical.

**ROUND.** The step of a ladder; also spelt "rung".

**ROUND BAR FENCING.** Iron fencing in which the horizontal rails are formed of round iron or rod iron.

**ROUNDED OR ROUND ENDED STEP.** In staircasing, the bottom step in a flight of stairs having its outer end (sometimes both) formed into half a circle, when it is known as a "round ended step".

**ROUNDEL.** A circle; an astragal; a semicircular bastion.

**ROUND ELBOW.** An elbow for a pipe having the external angle rounded.

**ROUND HEADED SCREWS.** Are generally used for locks, latches, etc., or where the metal or wood is too thin to allow it being counter-sunk for the head of an ordinary screw.

**ROUNDLET.** A little circle ; a roundel.

**ROUND NUMBERS.** A number divisible by ten.

**ROUND TOWERS.** Ancient towers found chiefly in Ireland, tall and tapering with a conical top.

**ROWAN TREE.** The mountain ash.

**ROWEN.** A stubble field left unploughed till after Michaelmas for the herbage.

**ROWLEY RAG.** A basalt found in Staffordshire, Armagh, Antrim and Londonderry ; chiefly used for paving and making artificial stone.

**ROYAL BLUE.** A vitreous pigment principally used for painting on glass and enamelling.

**RUBBED.** Applied to stone, means that the surface has been rendered smooth by rubbing with grit or sandstone.

**RUBBED WORK.** Or polished work, consists of plain stone work being rubbed down with freestone, sand and water, to a perfectly smooth surface.

**RUBBER.** A soft brick used for gauged arches.

**RUBBING STONE.** A circular stone for rubbing bricks on, about fourteen inches in diameter, perfectly level on the face, generally fixed on the banker in mortar.

**RUBBISH.** Fragments of buildings ; waste materials ; ruins.

**RUBBISH SHOOT.** A place where rubbish may be tipped or deposited.

**RUBBISH WHEEL.** A small iron wheel in a light frame ; used for raising light weights.

**RUBBLE.** Rough, undressed stones ; a mass of fragments of rock.

**RUBBLE.** Masonry in which the stones are roughly dressed with the hammer only.

**RUBBLE ASHLAR.** Consists of walling with an ashlar face and rubble backing.

**RUBBLE MASONRY.** That composed of unsquared stones.

**RUBBLE STONE.** The upper fragmentary and decomposed portions of a mass of stone.

**RUBBLE WORK.** Coarse walling constructed of rough stones.

**RUBIAN.** The colouring principle of madder.

**RUBIATES, RUBRIC or MADDER LAKES.** Consist of vegetable colours known as pink madder, rose madder, rose, rubiate and Field's lakes.

**RUBLE.** In Scotland, "rubble".

**RUBSTONE.** A whetstone for sharpening instruments.

**RUBY OF ZINC.** Sulphide of zinc.

**RUDENTURE.** The figure of a rope or staff, with which the flutings of columns are sometimes filled.

**RUDERATION.** According to Vitruvius, the laying of a pavement with pebbles.

**RUFF WHEEL.** An ore crushing mill for the pieces which will not feed into the usual crusher.

**RULE.** An instrument for marking short linear measurements ; a determinate mode for performing any operation.

**RULE JOINT.** A joint whose section is similar to the joint in an ordinary joiner's rule ; generally used for hanging a flap, etc.

**RULE JOINT HINGES.** Hinges specially made for a rule joint ; the wings or leaves are considerably wider than those in an ordinary butt hinge.

**RULE OF THREE.** Proportion.

**RUMBLE.** A revolving cask in which articles are polished by friction against each other.

**RUN.** To flow in any manner, as water, etc. ; to melt.

**RUN.** A row of planks for wheeling a wheelbarrow on.

**RUN.** Said of plasterer's putty when passed through a sieve.

**RUN.** Used in the same sense as lineal. Example : twenty-two feet run means twenty-two lineal feet, or running feet, or twenty-two feet long.

**RUNDLE or RUNGS.** A step of a ladder ; a round ; something put round an axis.

**RUNG.** The step or bar serving as a step in a ladder.

**RUNIC KNOT.** A twisted ornamentation among the Norse.

**RUNNER.** Another term for poling boards.

**RUNNER.** A rope to increase the mechanical power of a tackle; the moving stone of a mill.

**RUNNERS.** Planks used to keep the sides of trenches up while excavating; they are pointed and shod with iron at one end, and put in upright behind the wallings and driven down as the work proceeds.

**RUNNERS.** Fillets, or the pieces of stuff that the bottom of a drawer runs on.

**RUNNING BOLT.** A sliding bolt for a door.

**RUNNING BUDDLE.** A method of washing sand, ore, etc., in troughs, through which a supply of water is running.

**RUNTREE.** In Scotland, the head of a quarter partition.

**RUPEE.** An East Indian coin and money of account, nominally worth 2s.

**RUPERTS' DROP.** A drop of glass thrown while in a state of fusion into water, and consolidating into a retort-like shape.

**RUSSIAN DEAL.** Sometimes called northern pine or red fir, is imported from Riga, Archangel, Petersburg, Oniga; considered the best timber for all-round use; usually free from sap, knots, shakes or other defects; well adapted for hard wear and great strain.

**RUSSIAN DEALS.** Are chiefly of first and second quality (*prima* and *secunda*); generally come into the market unbranded or dry stamped only. The Petersburg deals are apt to be knotty, shaky and subject to dry rot; they are therefore inferior to the other Russian deals.

**RUST.** The red incrustation on iron, caused by exposure to air and moisture.

**RUST CEMENT** or **CAST IRON CEMENT.** Consists of cast iron turnings pounded until they will pass through a sieve of eight meshes to the inch, powdered sal-ammoniac or flour of sulphur is then added; used for caulking joints of iron tanks, pipes, etc.

**RUSTIC.** A term applied to summer houses, garden seats, etc., made by using the branches of trees in their natural form.

**RUSTIC** or **ROCK WORK.** Stones with their faces merely scabbled; known as quarry pitched, hammer-faced or hammer blocked.

**RUSTICATED.** Stones projecting beyond their joints and with their faces scabbled or smooth; ashlar masonry having deep channels or V shaped grooves at the joints.

**RUSTICATED** or **RUSTIC QUOINS** or **RUSTICS.** Quoins standing out beyond the face of the wall and with their faces scabbled or picked or rusticated.

**RUSTICATED JOINTS.** A term used to denote masonry in which the joints are either chamfered or sunk square below the face.

**RUSTICATED TABLE** or **TABLET.** One in which the surface is rough or frosted from being broken or picked with the hammer.

**RUSTIC ORDER.** A building in which the faces of the stones are rusticated.

**RUSTIC RAG WORK.** Rubble work having the face of the stones worked to a polygonal shape.

**RUSTIC WORK.** Summer houses, etc., made from branches of trees in their natural state.

**RUSTIC WORK.** Ashlar masonry having the joints worked with grooves, margins or channels to render them conspicuous; usually built in courses.

**RUST JOINT.** A caulked joint used for cast iron pipes, cisterns, etc., made with rust cement.

**RUST'S VITRIFIED MARBLE.** Consists of a mixture of glass and sand fused together.

**RYBAT** or **RYBATE.** The Scotch term for a reveal.

**RYEGATE** or **FIRE STONE.** A stone used for hearths, stoves, ovens, etc., or other places subject to a great heat which does not affect the stone if kept dry.

## S.

**S TRAP.** A trap of S shape, formed by a double bend in a lead pipe.

**SABICU** (*Acacia formosa*). Is found in the West Indies; resembles mahogany, but darker in colour; generally well figured, free from sap and shakes; weathers well.

**SABLIERE.** A term formerly applied to a piece of timber similar to a beam; also applied to a sand pit.

**SABOT.** An iron cap; a skid.

**SABULOUS.** Sandy; gritty.

**SACELLUM.** In ancient architecture, a monumental chapel within a church; a small chapel in a village; a small enclosed space without a roof.

**SACOME.** The exact profile of a member or moulding; applied by the French to the mouldings themselves.


**SACRARIUM.** A small chapel in a Roman house; a depository for sacred articles.

**SACRARIUM.** The cella, penetrale or adytum of a temple.

**SACRISTY.** An apartment in a church where the sacred vestments and utensils of the altar are kept; the vestry.


**SADDLE.** In lead or zinc laying, the piece put over the roll where two opposite pitches or slopes meet.

**SADDLE.** A thin piece of board fixed across an internal doorway so that the bottom of the door may be raised high enough to clear the carpet; in a flat roof, the piece of lead put over the roll where two slopes meet.

**SADDLE BACKED COPING.** That thicker in the middle than at the edges, thus, .

**SADDLE BACK ROOF.** A tower having a top in the form of a common roof gable.

**SADDLE BARS, SOUDLETS or SOWDELS.** Small iron horizontal bars to which the lead panels are tied with wire in lead light work, casement or quarry glazing.

**SADDLE BOILER.** A boiler of  section; used in hot water heating.

**SADDLED or WATER JOINTS.** Those formed by leaving them rather higher than the rest of the work, to throw the rain away from the joints and prevent it from finding its way through them and down the face of the wall; joints made in this way are said to be "saddle jointed" or "water jointed".

**SADDLE PIECE.** The piece of zinc at the top end of a roll cap in a zinc roof.

**SADDLE ROOF.** A roof or tower having two gables; sometimes called a "pack saddle roof".

**SADDLE STONE.** The stone at the apex of a pediment or gable.

**SAFE.** A cupboard for provisions; an iron cupboard for the safe keeping of documents, etc.

**SAFE.** A lead tray placed beneath or under a water-closet or a bath to catch leakage.

**SAFE EDGE.** A file having one of its edges smooth.

**SAFE LOAD.** The load or weight that will not produce fracture.

**SAFETY ARCH.** A saving arch.

**SAFETY VALVE.** A valve fitted to an engine to let off the surplus steam.

**SAG.** Said of a beam, arch, etc., bending in the centre owing to the weight above being too much for it to carry; to incline from the vertical or horizontal position.

**SAGGER.** A cylindrical case of fire-clay in which fine stoneware is enclosed while baking.

**SAGGING.** A term applied to scantling, etc., if bending in the middle.

**SAGITTA.** In geometry, often applied to the abscissa of a curve; in trigonometry it is the versed sine of an arc.

**SAGITTA.** Formerly applied to the keystone of an arch.

**SAGITTATE.** Shaped like the head of an arrow.

**SAILING COURSE.** A projecting course or courses standing out from the face of a wall; used round chimneys, etc.

**SAIL OVER.** Same as Projecture, which see.

**SAJENE.** A Russian measure of length, about seven feet.

**SALAMANDER'S HAIR or WOOL.** A species of asbestos or mineral flax.

**SAL AMMONIAC.** The hydrochlorate of ammonia.

**SALIENT.** A term sometimes applied to a projection of any part or member.

**SALIENT.** In heraldry, in a leaping posture.

**SALIENT ANGLE.** An external angle.

**SALIFEROUS ROCKS.** The new red sandstone system.

**SALLY.** A projecture; the end of a timber cut with an interior angle, *i.e.*, a bird's mouth.

**SALLY.** The splayed angle at each end of a scarfed joint; called a "tace" in Scotland.

**SALLYPORT.** In fortifications, a postern gate or other passage to sally out by.

**SALOON.** A lofty and spacious apartment for the reception of company, works of art, etc.; frequently vaulted at the top.

**SALT-CAKE.** Sulphate of soda made at alkali works for use in glass manufacture, etc.

**SALTED BRICKS.** Those having a thin glaze over their surfaces produced by throwing salt into the fire during the burning process.

**SALT GLAZED.** Said of pottery or bricks glazed by having salt thrown into the kiln.

**SAMEL BRICKS.** Formerly, place or grizzle bricks.

**SAMPLE.** A specimen.

**SANCTE BELL COT.** A small erection at the east end of the nave for the reception of the bell that gives notice of the Sanctus being commenced.

**SANCTUARY.** That part of a church where the altar is situated; same as presbytery; the Jewish temple.

**SANCTUM SANCTORUM.** The part of a temple containing the ark; the holy of holies.

**SAND.** Particles of stone not conjoined; mixed with lime or

cement for the purpose of reducing the cost; added to lime to prevent its cracking.

**SANDAL WOOD.** A wood resembling mahogany; remarkable for its fragrance; imported in logs; used for cabinet work.

**SANDARACH.** A substance obtained from the juniper tree; resembles lac, but less brilliant, lighter in colour and softer; used for pale varnish.

**SANDBAG.** A long thin bag filled with sand to stop the draught between the meeting rails of window sashes; bags filled with sand used in field fortifications.

**SAND BRICKS or SAND-MOULDED.** Bricks in the making of which sand has been used to permit their withdrawal from the mould.

**SAND BURNING.** The spoiling of a very thick casting by the long continued heat destroying the face of the mould.

**SANDED BRICK.** That when sand is sprinkled into the moulds to prevent the clay from sticking.

**SANDED SHEET CATHEDRAL GLASS.** That made by having sand thrown upon its surface when hot, which causes it to be fused in.

**SANDERS.** The red sandal wood.

**SANDEVER or SANDIVER.** Glass gall, a whitish salt scum cast up from glass in a state of fusion.

**SANDING.** A method of throwing sand on the last coat of paint while wet, done on outside work to represent stonework.

**SANDIX.** A kind of minium or red lead.

**SAND PAPER.** Paper covered with fine sand; powdered glass is now generally used, when it is known as glass paper; used for bringing work to a smooth surface.

**SAND PILES.** Holes filled with sand to act as piles.

**SAND PIPES.** Cylindrical hollows tapering down into chalk deposits and filled with sand, clay, etc.

**SANDSTONE.** A soft, porous stone; varies very much in quality, some being comparatively hard and some soft; the harder kind is most used for building purposes; composed of

rounded grains of quartz united by an argillaceous or calcareous cement; its durability can only be tested by exposing specimens to the action of the weather.

**SANDWICH BEAM.** A fitch beam, which see.

**SANDY.** Abounding with, full of, or the colour of sand.

**SANITARY.** Pertaining or designed to secure health.

**SANITATION.** Sanitary science, or its application.

**SAP.** The circulating juice or pith of trees that rises from the earth and ascends into the branches, etc., to feed and nourish them; the stain of a greenish tinge seen on the edges of planks or corners of logs; a serious defect, as it soon decays; the alburnum of a tree.

**SAP GREEN.** A light green pigment from inspissated juice.

**SAPHETA.** Same as Soffit.

**SAPLING.** A young tree.

**SAPWOOD.** The soft wood newly formed under the bark.

**SARACENIC ARCHITECTURE.** A style of architecture derived from the Saracens.

**SARANGOUSTY.** A composition for applying to damp walls.

**SARCOPHAGUS.** A species of stone formerly used in sepultures; a stone coffin.

**SARKING.** Thin boards for lining, etc.

**SARKING FELT.** Similar to asphalted felt, but is only about one-twelfth inch thick; used for a roof covering and under slates; made in rolls thirty-two inches wide and thirty yards long.

**SASH.** The frame containing the glass in a window.

**SASH BARS.** The slight internal pieces of a sash when divided into more than one pane; called "astragal" in Scotland.

**SASH DOOR.** That in which the part above the lock rail is prepared for glass.

**SASH FASTENER.** A catch, usually fitted with a spring used to fasten window sashes.

**SASH FRAME or WINDOW FRAME.** The frame into which sashes are

fitted for the convenience of sliding them up and down.

**SASH LINES or SASH CORDS.** The small ropes or cords by which a sash is suspended in the sash frame.

**SASH TOOL.** A small brush for painting sashes.

**SASH WEIGHTS.** Metal weights attached to the sash lines to counter-balance a sliding sash.

**SASH WINDOW.** A window which opens by sliding; usually in two halves, vertically.

**SATIN SPAR.** A fine fibrous variety of carbonate of lime.

**SATIN WALL PAPER.** That in which either the ground or pattern, or both, are of a polished lustre similar to satin.

**SATIN WALNUT.** A fictitious name applied to the tree of the witch hazel order; known in the States as "red gum" or "sweet gum".

**SATIN WOOD.** A wood of a fragrant odour, similar in colour to boxwood; imported from St. Domingo, etc., in square logs and planks; used chiefly in cabinet work.

**SAVING ARCH, SAVING.** A relieving arch.

**SAVORY.** A bay in a vaulted ceiling.

**SAW.** A cutting steel instrument with a toothed edge.

**SAW FILE.** A file of triangular section for sharpening a saw.

**SAWING.** Cutting anything with a saw, but especially timber.

**SAW MILL.** A mill for sawing logs and other timber.

**SAW PIT.** A pit excavated for sawing timber, superseded by the modern saw mills.

**SAWPIT.** In sawing large timber by hand the log is placed over a pit and cut with a saw worked by two men. See Top Sawyer and Bottom or Pit Sawyer.

**SAW SET.** An instrument of various forms; used to turn the teeth of saws alternately outward.

**SAXICAVOUS.** Rock boring.

**SAXON ARCHITECTURE.** A massive style of architecture prevailing from the fifth century to the Norman Conquest.

**SCABBLED.** Applied to stone having the tool marks running diagonally across the face.

**SCABBING or SCAPPLING.** Consists of reducing stones to a closer approximation to the required dimensions by roughly dressing or scabbling them.

**SCABBING or SCAPPLING HAMMER.** A hammer with a flat or spalling face on one end and a pick-faced or pointed one at the other; the former is used for knocking off the irregular angles, and the latter for reducing the surface irregularities of the stone.

**SCABELLUM.** A pedestal used to support busts, etc.

**SCAFFOLD.** A stage, platform or temporary erection of poles, planks, etc., for the use of workmen in erecting walls, etc.

**SCAFFOLD or LADDER POLES.** Those made from young trees of larch or spruce, averaging about thirty-three feet in length.

**SCAFFOLD BOARDS or PLANKS.** The boards or planks forming the gangway or platform of a scaffold.

**SCAFFOLDING.** The name given to the poles, planks, etc., necessary to carry out the erection of a building.

**SCAGLIA.** A reddish variety of chalk.

**SCAGLIOLA.** Consists of plaster of Paris mixed with colouring matters dissolved in glue or isinglass; applied to walls, columns, etc., to imitate marble.

**SCALA.** A ladder; a staircase.

**SCALARIFORM.** Like a ladder.

**SCALE.** A line or instrument divided into a certain number of equal parts; used in mathematical and architectural drawing for laying down heights and distances.

**SCALE BOARDS.** Veneers.

**SCALE DRAWINGS.** Those made to a scale, as one and a half inch to a foot, therefore every eighth inch would represent one inch; a quarter inch, two inches, and so on.

**SCALE STEPS.** Scotch term applied to "fliers".

**SCALENE.** Oblique.

**SCALENE CONE.** That in which the axis is inclined to its base and its sides unequal.

**SCALENE TRIANGLE.** One whose sides are all unequal.

**SCALLAGE.** Another term for a lichgate or lychgate.

**SCALLOP.** A recess or curving of the edge of anything, like the segment of a circle; to mark or cut the edge or border of anything into segments of circles.

**SCAMILLI IMPARES.** Formerly, blocks used to raise some of the members of a building which would otherwise be lost to view by the projection of other members.

**SCAMILLUS, SCAMILLI.** Plain blocks used as a substitute for a pedestal or subplinth; placed under columns, pillars, etc.; used in Ionic and Corinthian columns.

**SCANDULÆ.** In ancient architecture, shingles or flat pieces of wood used as a roof covering instead of tiles.

**SCANTLE.** A gauge for marking slates in trimming and holing them.

**SCANTLE.** To divide into small pieces.

**SCANTLING.** The breadth and thickness of a piece of timber.

**SCANTLING.** The term applied to timber sawn all round, or all quartering under six inches. The dimensions, width and thickness, of parts in a framing are sometimes called the scantlings of the pieces.

**SCANTLING LENGTH.** Said of a stone over six feet long.

**SCANTLING OF A STONE.** The size of the stone in length, breadth and thickness.

**SCAPE.** That part of a shaft or column where it springs out of its base in a curve; the flutes sometimes descend and follow the curve of the scape.

**SCAPE MOULDING.** That of



section.

**SCAPOLITE.** A mineral of lime and alumina in rod-like crystals.

**SCAPPLE or SCABBLE.** A term used by masons, and signifies the method of reducing a stone to a straight surface without working it smooth.

**SCAPPLE.** Formerly applied to timber; it signified the barking of a tree or roughly squaring it with the axe.

**SCAPUS.** The shaft of a column.

**SCARCEMENT.** Formerly applied to a plain flat set-off in a wall.

**SCARCEMENTS.** In Scotland, the footings of a wall or the large stones used for the foundation course.

**SCARE.** In Scotland a scarf.

**SCARF or SCARPH.** An oblique or indented joint made in timber beams, ridges, etc., for the purpose of lengthening them.

**SCARFED.** Having a scarf.

**SCARFED BEAM.** One in which a scarf has been made.

**SCARFING.** Called "scare" in Scotland. The formation of a beam, etc., out of two pieces of timber without using fish plates.

**SCARLET LAKE.** A pigment made from cochineal.

**SCARP.** In earthwork, a slope.

**SCARP.** In fortifications, the interior slope of a ditch at the foot of a rampart.

**SCARP.** In heraldry, the representation of a military scarf.

**SCARPED.** Cut down like the scarp of a fortification or earthwork.

**SCAVENGER.** A dustman, or one who cleans the streets by sweeping, scraping and carrying off the refuse.

**SCENOGRAPHIC.** Drawn in perspective.

**SCENOGRAPHY.** The representation of an object on a perspective plane.

**SCHEDULE.** In Scotland, a bill of quantities.

**SCHEDULE OF PRICES.** A list of prices attached to a contract.

**SCHÉELE'S GREEN or MITIS GREEN.** A pigment produced from arsenites of copper.

**SCHÉELE'S GREEN.** The commercial name applied to arsenite of copper.

**SCHÉELIN.** A calcareous ore.

**SCHEME.** A diagram; the representation of any design or figure by lines, to make it comprehensible.

**SCHEME ARCH or SKENE ARCH.** Another term for a flat segmental arch; a window or door frame with a segmental head is referred to sometimes as being "scheme headed". The crown of an arch is also sometimes called a scheme.

**SCHENE.** An Egyptian lineal measure of seven and a half miles.

**SCHIST.** A rock having a slaty structure.

**SCHOLA.** The margin or platform surrounding a bath; a portico.

**SCHOLASTIC.** Pertaining to schools.

**SCHOOL.** A building for education or instruction.

**SCHOOL BOARD.** A selected public body elected to provide for and see to the education of the children of their district.

**SCHOOL HOUSE.** A house appropriated for the use of a school; a school.

**SCHORL.** A black, hard, brittle mineral crystallised in masses or long crystals; sometimes columnar and radiating from a centre.

**SCHORLACEOUS GRANITE.** That containing pieces of schorl.

**SCHWEINFURTH GREEN.** A green salt of copper used as a pigment.

**SCIAGRAPH.** A section of a building exhibiting its interior.

**SCIAGRAPHY.** The profile or vertical section of a building exhibiting its interior; the art or science of delineating shadows.

**SCIENCE.** Knowledge reduced to a system.

**SCINTLING.** The method of placing raw bricks when half dry diagonally (scintled) and a little distance apart to allow the wind to pass between them.

**SCISSEL.** The clippings of metals.

**SCONCE.** A hanging or projecting candlestick with a reflector; a reflector for a wall lamp; also applied to a squinch.

**SCONCHEON.** The portion of the side of an aperture from the back of the jamb or reveal to the interior of the wall.

**SCOOP WHEEL.** A wheel with buckets round it; used in dredging.

**SCORE.** The number of twenty; a notch or incision; a groove usually roughly cut or scratched.

**SCORED.** The method of scratching plaster to form a better key for the next coat.

**SCORIA.** Dross; the recement of metals in fusion.

**SCORIFICATION.** The operation of reducing metal into "scoria".

**SCORODITE.** A native compound of arsenic acid and oxide of iron.

**SCOTCH.** A drag or brake.

**SCOTCH BOND.** A term sometimes applied to English garden wall bond.

**SCOTCHED WORK.** A term applied to stone finished by means of a hammer with a very fine point.

**SCOTCH GRANITE.** Is considered the best on account of its beauty and durable qualities; found chiefly in Aberdeenshire, Argyleshire, etc.

**SCOTCH IRON.** Such as Govan, Langloan, Coltness, Calder, Clyde, Carron, Carnbroe, etc., are produced chiefly from clay ironstone; used chiefly for foundry purposes; sometimes mixed with north of England pig iron to improve its strength.

**SCOTGATE ASH.** A sandstone found near Harrowgate; of a white colour, and in some cases of a light green tint.

**SCOTIA.** A hollow or concave moulding; the Greek term for shade or shadow.

**SCOTTISH DEAL.** That obtained from the Scottish fir tree; generally known as red or yellow fir; considered inferior to foreign fir on account of its containing more resin; not suitable for carrying heavy weights; usually used for skirtings, mouldings, etc.; also called "northern pine," "red" or "yellow pine".

**SCRAP BAR IRON.** That made from short pieces that are useful for no other purpose; they are welded and rolled together into a single bar.

**SCRAPE.** In painting or paper-hanging, to scrape off the old paper or colouring from the walls or ceiling.

**SCRAPER or SHAVE HOOK.** A sharp-edged triangular piece of steel, the side being about two inches long, set at right angles to a handle fixed at the centre; used for scraping and finishing off lead joints and other purposes.

**SCRAP REVETMENT.** A retaining wall with the earth level with the top.

**SCRATCH WORK.** A kind of fresco with a black ground on which a white plaster is laid and scratched off with an iron bodkin; the black ground appearing and serving for shadows, etc. See Sgraffitto.

**SCREED.** A term applied to wooden rules for running mouldings.

**SCREED.** A thin layer of lime and hair run in the inner reveal, on the face running parallel to the face of the wall, to bed a window or door frame against, the edge being pointed down after the frame is fixed.

**SCREED.** A narrow piece of plaster, or a wood ground fixed on the face of a wall to form a guide to float the second coat of plaster to.

**SCREED.** A narrow strip of wood laid transversely across the street between each row of paving blocks to provide a regular joint between each row, and to allow space for the grouting material. Wood blocks are frequently laid without "screeds" as the spaces are said to shorten the life of the road.

**SCREEDING or FLOATING.** In plastering, the second coat applied; called screeding from its being brought to a level surface with the screeding rule and hand float.

**SCREEDING RULE.** A plasterer's straight edge; used for bringing the plaster to a perfect plane.

**SCREEN.** A partition, enclosure or parclose, separating a portion of a room, passage, etc., as a vestibule screen, chancel screen, etc.

**SCREEN.** A large rectangular sieve for sifting lime, sand or gravel; usually propped up in an inclined position, and the sand, etc., thrown from a shovel against the wirework thus sifting it.

**SCREENED.** Said of material that has been passed through a sieve.

**SCREENING.** The separating of fine from coarse particles of any substance by means of a sieve; called "riddling" in Scotland.

**SCREVER.** A tool used by turners; a kind of parting tool.

**SCREW.** A spiral thread formed round a cylinder, and combines in itself the properties of the lever and the plane; one of the six mechanical powers.

**SCREW BOTTOM.** A bib-cock is said to have a "screw bottom" when the lower end is secured with a screwed nut.

**SCREW-DOWN COCK.** A valve closed by a screwed movable disc over the aperture.

**SCREW DRIVER.** A tool for turning screws; also called turn-screw.

**SCREW NAIL.** A nail grooved like a screw; also applied in Scotland to an ordinary wood screw.

**SCREW PILE.** An iron shaft having attached to the bottom a broad bladed screw with one or two turns; sometimes the stem of the pile is of wood.

**SCREW PINE.** A tree of the genus *Pandanus*, which grows in the East Indies, etc.

**SCREW PLATE.** A steel plate for cutting male screws or threads of small diameter.

**SCREW JACK.** A strong screw resting by means of a large nut upon a pedestal; used for supporting or lifting heavy weights.

**SCREW SHACKLE.** An apparatus for tightening up the rods of an iron roof truss.

**SCRIBBLED.** A Scottish term applied to stones hammer dressed, and with a chisel draught round the margin; strictly speaking, the term should be applied to the beds and joints of the above.

**SCRIBE.** A spike or large nail with a sharp point; used to mark bricks or stones by drawing it along the edges of the template previous to cutting.

**SCRIBE.** The cut or edge formed by scribing.

**SCRIBE.** To mark by rule or compass so as to fit an irregularity; a steel point used for marking the position of bolt holes in ironwork, or in draw boring, etc.

**SCRIBED.** Anything having a scribe.

**SCRIBING.** The method or act of fitting the end of one moulding over another instead of mitring both the pieces; the cutting of an irregular edge to meet some existing irregularity, as a skirting to a floor, a lining to a wall, etc.

**SCRIM.** In Scotland, thin canvas sometimes used to cover walls before hanging the paper; the walls are usually battened first.

**SCROLL.** A convolved spiral ornament of the Ionic order; generally applied to any spiral ornament.

**SCROLL.** The end of a handrail terminated in the form of a scroll; usually over a curtain step.

**SCROLL MOULDING.** A roll moulding; chiefly used in the Decorated style; in the abacus the upper half projects and overlaps the lower.

**SCROLL STAIRS.** Stairs starting with a scroll, *i.e.*, the handrail is terminated in a scroll over a curtain step.

**SCULLERY.** The place where culinary utensils are kept and washed.

**SCULPTITE.** Formed by carving.

**SCULPTOR.** A carver of figures in wood, stones or other material.

**SCULPTURE.** The art of carving wood, or hewing stone into figures; the work formed by so doing.

**SCULPTURED STONES.** Monumental stones, found in a certain part of Scotland, inscribed with symbols.

**SCULPTURESQUE.** In the style of sculpture.

**SCUMBLING.** A rough dotted shadow given to trees, grass, etc., in a drawing.

**SCUNTION.** In Scotland, applied to a stone on the inside of a wall, one face of the stone forming the jamb; also called "scontion" and "scunshon".

**SCUTCHEON.** Formerly applied to the parts or angles of buildings, as splayed window jambs, etc.

**SCUTCHEON.** An escutcheon; the ornamental plate on a key-hole.

**SCUTCHEON.** In heraldry, the representation of a shield.

**SCUTCHING.** A term applied in "pointed work" when the chisel hammer is used with short strokes.

**SCUTIFORM.** Having the form of a shield.

**SCUTTLE.** A square hole in a roof, with a lid.

**SCUTTLE CASK.** A butt, cask or barrel to hold water for daily use; frequently placed to catch the rain-water from a roof.

**SCYRICUM MARMOR.** Formerly applied to a white and to a yellowish marble; used in Roman architecture.

**SEA.** A large basin or laver in a temple.

**SEA GREEN.** Of a faint bluish-green.

**SEA HORSE.** A fabulous animal, half horse half fish; used or imitated in heraldry and decoration.

**SEA LION.** In heraldry, a fabulous animal, half lion half fish.

**SEA SAND.** Contains alkaline salts which attracts moisture; it is not so sharp or angular in its grit as pit sand, the grains having been rounded by attrition.

**SEA WATER.** The specific gravity of sea water is about 1.0277, that of inland seas or into which rivers flow is much lighter.

**SEAL.** In sanitary work, the water in a trap. See Water Seal.

**SEALED.** Said of a trap when properly filled with water.

**SEALED SOLDER.** That officially stamped by the Plumbers' Company as a guarantee that it consists of two parts lead and one of tin; also called "city solder" and "plumber's sealed solder".

**SEALING.** The method of fixing a piece of wood or iron on a wall with plaster, mortar or cement.

**SEAM.** Of glass, equals twenty-four stone or 120 lb.

**SEAM.** In plumbing, a plain soldered joint.

**SEAM.** A thin layer separating strata of greater magnitude.

**SEAM.** A horse load of timber.

**SEAM JOINT.** In lead laying, one formed by turning up the edges of the sheet, one edge over the other and dressing them down close.

**SEAM ROLL.** A roll formed by dressing over the edges of two sheets of lead in the form of a roll.

**SEA OOZE.** The soft mud near the sea shore.

**SEA SHORE.** Land lying adjacent to the sea.

**SEASONED.** Said of timber or stone when dry and fit to use.

**SEAT.** A pew in a church; a bench; a residence; a mansion.

**SEAT ENDS.** The vertical standards forming the ends of a pew in a church or chapel.

**SEATING.** Material for seats; a collection or series of seats.

**SEATING.** The prepared surface on which a valve fits.

**SEA WALL.** An embankment on the shore to keep back the tide.

**SECANT.** A line that cuts another; dividing into two parts; cutting.

**SECANT.** Of a circle, is a straight line drawn from any point without a circle to cut the circumference and meet it in another point.

**SECANT.** Of an arc, a right line drawn from the centre through one end of the arc and terminated by a tangent drawn through the other end.

**SECCO.** A fresco in which the colours have a dry look, being sunk into the plaster.

**SECONDARY STRATA.** That comprised under the heads of sandstone, limestone and shale.

**SECOND CARRIAGE VARNISH.** That consisting of second sorted gum anime, fine clarified oil, turpentine, litharge, dried sugar of lead and dried coppers boiled and mixed.

**SECOND CUT FILE.** A file coarser than a smooth file.

**SECOND KNOTTING.** Consists of red lead ground in oil and thinned with boiled oil and turpentine.

**SECOND MELTING.** Said of or applied to iron remelted in a cupola.

**SECOND QUOIN.** A stone in the same course and of the same height and next to the quoin.

**SECONDS.** Bricks similar to cutters but slightly uneven in colour.

**SECONDS.** In the slate world a "seconds" slate is distinguished by its thickness and irregular cleavage, and not, as many suppose, because it is inferior in "metal," or lacks points of endurance. Also see Best.

**SECOND SEASONING.** Of timber, consists of stacking it to dry after it has been cut to the required sizes.

**SECOND SIZED TONS.** Slates from twenty-four inches to thirty-eight inches long and of various widths; sold by the ton of twenty hundred-weights.

**SECRET DOVETAILING.** That in which the dovetails are formed on the faces of the mitres, or with a tap at the angles, so that when put together only a straight joint is seen, the dovetails being hidden; chiefly used in high-class joinery and cabinet work.

**SECRET GUTTER.** One formed under the slates next a wall, skylight, etc., constructed in various ways.

**SECRET HIP GUTTER.** A gutter formed on the back of a hip and covered by the slates.

**SECRET HIP ROLL.** A roll fixed on the back of a hip and dressed over with lead which forms a secret gutter each side of the roll, which is nearly hidden by the slates.

**SECRET NAILING.** A method of nailing floor boards through their edges, which are generally tongued and grooved in a special way to prevent splitting.

**SECRET NAILING.** A method of slightly raising the grain of wood with a small chisel, the nail being driven in and the grain glued down again over the head of the nail.

**SECRET TACK.** In plumbing, a lead tack fixed so as not to be seen.

**SECTION.** A vertical plan of a building (not necessarily) showing it as it would appear upon an upright plane cutting through it.

**SECTION.** A moulding or other member of architecture shown in profile.

**SECTION.** Of a solid, the plane of separation dividing one part from another.

**SECTOR.** The part of a circle comprehended between two radii and the intercepted arc; a triangle formed by two radii and the arc of a circle.

**SECTOR.** A mathematical instrument for determining a fourth proportional.

**SEDILIA.** The seats for the officiating priests on the south side of the sanctuary.

**SEED LAC.** The insoluble portion left after pounding and digesting stick lac.

**SEEDLING.** A plant grown from a seed.

**SEELING WORK.** A term formerly applied to wainscoting.

**SEGGARS or SEGGERs.** Large fire-clay jars in which articles of a delicate nature are placed to protect them from direct contact with the fire, which would discolour them.

**SEGMENT.** A part of a circle, less than a semicircle, and bounded by a cord; a part cut off from a figure by a line or plane; to divide into segments.

**SEGMENT.** Of a sphere, that portion cut off by a plane in any part, except the centre, so that the base of such segment is always a circle.

**SEGMENTAL.** Pertaining to, consisting of, or like a segment.

**SEGMENTAL ARCH.** That in which the height, from the springing to the crown, is less than the radius of the circle.

**SEGMENTAL HEADED.** Applied to a circular-headed window, door, etc., in which the rise above the springing or cord line is less than the radius of the circle.

**SEJANT.** In heraldry, sitting like a cat with the forefeet straight.

**SELENITE.** A variety of sulphate of lime.

**SELENITE or GYPSUM.** Sulphate of lime, which forms, when burnt and ground, plaster of Paris.

**SELENITIC.** Pertaining to selenite.

**SELENITIC CLAY.** A preparation of clay and sulphate of lime.

**SELENITIC LIME.** That to which a small proportion of plaster of Paris has been added.

**SELENITIC PLASTER.** Consists of a small proportion of plaster of Paris added to hydraulic limes, or that made from selenitised lime or selenitic cement.

**SELER.** See Tester.

**SELF COLOURED.** Of one colour throughout.

**SELLA.** A seat or chair.

**SELLA CURULIS.** A chair of state.

**SEMÉ.** In heraldry, a field or charge strewn with stars, crosses, etc.

**SEMI-ATTACHED** or **SEMI-DETACHED.** Applied to a pair of villas whose party wall is common to both, and which are not attached to other villas.

**SEMI-ATTACHED COLUMNS.** Those with half of their solid built into the wall.

**SEMI-BEAMS** or **CANTILEVERS.** Any projecting beam supporting a load; fixed at one end and free at the other.

**SEMICIRCLE.** The half of a circle.

**SEMICIRCULAR.** Having the form of half a circle.

**SEMICIRCULAR** or **SEMI-HEADED.** Said of a frame, arch, etc., in which the rise above the springing is equal to the radius of the circle, and forms a complete half circle in elevation.

**SEMICIRCULAR ARCH.** That whose elevation is a half circle or semicircle.

**SEMIELLIPTICAL.** Said of a window frame, door frame, arch, etc., in which the rise is equal to the semi-minor axis and the width to the major axis of the ellipse; in elevation it would form half of an ellipse.

**SEMI-LUNAR.** Having the shape of a half moon.

**SEMI-METAL.** A metal not malleable.

**SEMI-METALLIC.** Having the nature of semi-metal.

**SEMINARY.** Originally, a nursery for rearing plants, now applied to an academy, college or university.

**SEMI-ORDINATE.** In conic sections, a line drawn at right angles to and bisected by the axis.

**SEPIA, SEPPIA.** A pigment produced from the cuttle-fish.

**SEPIC.** Done in sepia, as a drawing.

**SEPIMENT.** A hedge; a fence.

**SEPTANGULAR.** Having seven angles.

**SEPTARIA.** Spheroidal masses of argillaceous limestone.

**SEPTFOIL.** A figure composed of seven equal segments of circles; used in the Catholic Church in symbol of the seven sacraments.

**SEPTILATERAL.** Having seven sides.

**SEPULCHRE.** A grave; a tomb.

**SEQUIA WOOD.** The *Welling-tonia*, a genus of very large fine trees. See Red Wood.

**SERAGLIO.** The Sultan's palace at Constantinople; the Italian term for an enclosure; in Latin, a bar for fastening.

**SERAL.** In the East, an inn; the Persian term for palace.

**SERIES.** If two or more wires are joined to each other by their ends, they are said to be connected in series, and if the free end of the first and that of the last wire (the whole series being practically one wire) are joined to the two terminals of an "excited" dynamo, the difference of potential between the ends of each wire would be proportional to its own resistance, and the difference of potential (measured in volts) between the beginning and the end of the "series" will be that of the machine, but the current will be the same for each wire, and is proportional to the sum total of the various resistances.

**SERGES.** The wax candles on the altars of Roman Catholic churches.

**SERPENTINE.** A variety of marble; derives its name from its mottled appearance. Pure serpentine consists of hydrated silicate of magnesia, but it is often found mixed with carbonate of lime, soapstone and diallage (the foliated green variety of hornblende and dolomite is called diallage). Serpentine is chiefly used for indoor work, as chimney pieces, pilasters, table tops, etc.; it does not weather well, soft, easily worked, not

brittle; compact in texture, and capable of receiving a fine polish; found in Cornwall, Anglesey, etc.

**SERRATED.** Notched on the edge like a saw.

**SERRATION.** The act of forming, or the formation of notches like a saw.

**SERRATURE.** A notching in the edge like a saw; frequently formed in ridge tiles, border tiles for garden paths, etc.

**SERVER or FEEDING SPADE.** A small spade with a long handle; used by plasterers for beating up plaster, etc., on the board to prevent its setting; also for feeding the hawk with small pats at a time.

**SERVICE BOX.** The small cistern in a water-closet containing the supply of water for flushing them.

**SERVICE PIPE or MAIN.** The pipe used for the supply of water or gas to a building, connected with the water or gas main of the company.


**SERVING.** Binding a large rope with canvas or spun yarn to prevent wear by chafing.

**SERVING HATCH.** A small window or door in a bar, etc., for passing through refreshments, etc.

**SET.** Mortar, cement, etc., is said to have "set" when it has attained such a degree of hardness that its form cannot be altered without causing fracture.

**SET.** In plastering, to "set" is to put on the third and last coat, called the "setting coat".

**SET.** The permanent change of figure in any material strained beyond its elastic limit is called "set".

**SET OFF.** In plumbing, a double bend in a pipe, thus, .

**SET OFF or OFF SET.** That portion of a wall (not necessarily) which is exposed horizontally when the portion above is reduced in thickness.

**SET SCREW.** A bolt with a male thread, but with no nut, the hole being tapped for its reception.

**SETTING or RED.** A group of gas retorts.

**SET UP.** A term used by wood-

working machinists to denote the operation of setting their machines for the work required to be done, as running mouldings, etc.

**SET UP.** Formerly, to caulk a lead joint, or to turn up the edge of a sheet of lead.

**SETT.** In piling, a piece placed temporarily on the head of a pile which is beyond the reach of the monkey.

**SETT.** A stone for paving.

**SETTEE.** A long seat with a back to it.

**SETTING.** A horizontal square timber used in sinking shafts; to place hewn stones in position and bed in mortar is called "setting".

**SETTING.** The hardening of plaster or cement.

**SETTING or FINING OFF.** In plastering, the third or last coat of plaster.

**SETTING BAR.** That used by masons for setting stone.

**SETTING COAT.** In plastering, the third and last coat.

**SETTING OUT or SET OUT.** The act of drawing on paper or marking on materials, which is afterwards worked or cut to the shape, size, etc., so marked or drawn.

**SETTING OUT.** The laying down of heights and widths of work to be performed.

**SETTING OUT ROD.** A rod, board or lath used by joiners for setting out windows, doors, etc.

**SETTINGS.** Horizontal planks used in excavating trenches of great depth to keep the vertical pieces called "cleadings" in their places.

**SETTING TANKS.** The tanks in which the deposit of sludge takes place either by mere gravity or after chemical treatment.

**SETTLE.** A long bench with a high back.

**SETTLED.** When cracks appear in the main walls of a building, especially if partially horizontal, the building is said to have "settled"; this may arise from various causes.

**SETTLEMENTS.** Those parts in which failures or fractures have occurred; caused by sinking or subsidence of a building.

**SEVEN WONDERS OF THE WORLD.** The Pyramids, the Hanging Gardens of Babylon, the Temple of Diana at Ephesus, the Mausoleum, the Colossus, the Pharos at Alexandria and Phidia's Statue of Jupiter.

**SEVEREY or SAVORY.** A bay, division or compartment of a vaulted ceiling.

**SEVEREY.** A compartment or division of scaffolding; a separate portion or division of a building.

**SEWAGE.** Liquid refuse of water-closets, etc., carried off by sewers.

**SEWAGE EJECTOR.** An apparatus for raising liquid sewage matter to a higher level.

**SEWER.** The main drain or passage underground for carrying off sewage; it is public property and under the charge of the local authority; all private drains, as house drains, etc., usually empty themselves into the sewer.

**SEWERAGE.** A system or method of draining by sewers; also used in the same sense as "sewage".

**SEWER BRICK.** An ordinary hard burnt brick, smooth and regular in form.

**SEWER GAS.** A mixture of several gases which emanate from decomposed matter in sewers.

**SEXAGESIMAL.** The division of a line into sixty parts, then each of these parts again into sixty.

**SEXANGLE.** A figure having six angles.

**SEXANGULAR.** Hexagonal; having six angles.

**SEXTANT.** The sixth part of a circle; an instrument like a quadrant, for measuring angular distances.

**SEYSSSEL ASPHALT.** That made from a limestone saturated with bitumen; found at Pyrimont Seyssel, in the Jura mountains; ground and mixed with grit and heated mineral tar, run into moulds to form blocks about eighteen inches square and six inches thick; also known as "Claridge's patent asphalt".

**SGRAFFITTO.** A method of decorating walls with plaster, each coat applied being of a different colour, the required decoration being pro-

duced by chipping away the plaster.

**SHACKLE.** Links in a chain fitted with a movable bolt so that the chain can be unfastened.

**SHADE.** Is usually defined as a hue or colour to which has been added more or less black; thus any number of shades can be obtained of the same colour according to the amount of black added. Also see Hue and Tint.

**SHADED.** Said of a drawing when the sections, etc., are made darker to distinguish them from other parts.

**SHADING.** The act or method of representing light and shade in drawing.

**SHADOWS, SHADOWING.** The art of correctly casting the shades or shadows of objects and representing their degrees of shade.

**SHAFT.** The middle portion or body of a column starting from the top of the base and finishing at the underside of the capital; also called the "fust," "trunk" or "body".

**SHAFT.** Of a king post, the part between the joggles.

**SHAFT.** A high chimney containing a single flue; a chimney shaft or stack.

**SHAFT.** A long metal rod conveying power by revolution; a vertical means of access to a drain, a mine, etc.

**SHAFTED.** Having a shaft or shafts.

**SHAFTED.** In heraldry, having a handle.

**SHAFTED IMPOST.** That having horizontal mouldings, and in which the sections of the arch above and the shaft or pier below are different.

**SHAKE.** A split, crack or cleft in timber. See Cup Shake, Star Shake and Heart Shake.

**SHAKY.** Said of timber having shakes in it.

**SHALE.** An indurated slaty clay frequently occurring in beds in the coal measures, and containing a large quantity of bitumen.

**SHALLOW WELL.** A well sunk in a porous surface stratum.

**SHAM.** A grate with front and bars but without back or hobs.

**SHAMBLES.** A slaughter house; butchers' stalls; also applied to niches or shelves in mines, by which from one to another the ore is raised to the top.

**SHAM FRONT.** A fire grate with front and bars but no hobs or back.

**SHAM SHUTTERS.** Those when the elbow linings of a window are made to look like shutters.

**SHANK.** The "tail" of a bib-cock; the handle of anything, or the long piece connecting the handle proper with the head; a large ladle used in an iron foundry.

**SHANK.** The long part or lever portion of an instrument.

**SHANK.** Called by the Romans "femar"; the space between the channels of a triglyph; sometimes called the "leg" of the triglyph.

**SHANK.** In handrailing, the few inches of straight rail left on the curved part of a wreath, etc.

**SHARD.** A fragment of earthenware.

**SHARP.** The process of sharpening quarrymen's or masons' tools when paid for by number is called so many "sharps"; of sand, made up of angular grains, bold or prominent in profile, cleanly cut.

**SHARP.** Bold or prominent in profile; acute angled; said of mouldings when the arris is left keen.

**SHARP CUT.** Clearly outlined, or well defined in profile.

**SHARP SAND.** That composed of angular grains, the sharpness of which can be determined by rubbing a few grains near the ear to produce a grating sound.

**SHAVE HOOK.** See Scraper.

**SHAVING.** A method of scraping or "shaving" lead so that it can be properly soldered.

**SHAVING TOOL.** A two-handled scraper for smoothing slate slabs.

**SHEARING STRENGTH.** The resistance offered by a body to being shorn, *i.e.*, to being distorted by one part sliding on to another.

**SHEARING STRESS.** The tendency of one body or side to slide upon the other.

**SHEAR LEGS.** Consist of two

stout poles crossed and lashed together at the top, the bottom ends being spread about nine feet apart; a jib or stout pole is fixed between the top of the legs, and being provided with a block and fall, is used for raising weights.

**SHEARS.** An engine for raising heavy weights; a double-bladed instrument for cutting zinc, etc., similar to scissors but very much larger. Same as Shear Legs.

**SHEAR STEEL.** Blister steel which has been bundled and rolled at a welding heat. When this operation has been performed once the product is "single shear," when oftener "double shear".

**SHEAR STEEL or TILTED STEEL.** That produced by the process of cementation, the exterior only of the bars being carbonised.

**SHEATHE.** To case or cover with boards or sheets of copper.

**SHEAVE.** The grooved wheel of a pulley on which the rope or chain works.

**SHED.** A slight wooden building, generally applied to a lean-to building.

**SHED ROOF.** A lean-to.

**SHEELING or SHEILING.** A cottage.

**SHEEPSKIN.** A practice of using a coat of distemper on woodwork, and binding the dirt down with a liberal coat of clearcole, thereby filling up the pores and stopping the suction of the wood.

**SHEER LEGS.** A contrivance for raising heavy weights, consisting of two legs with a pulley at the top, and a rope led from a winch or crab.

**SHEET.** A thin plate of metal, as sheet lead, etc.

**SHEET CATHEDRAL GLASS.** Sheet glass, tinted; chiefly used in ecclesiastical work.

**SHEET COPPER.** That in broad, thin plates or sheets.

**SHEET GLASS.** That blown in the form of a cylinder and afterwards flattened out to a rectangular sheet; also known as "cylinder glass," "German plate glass," etc.; plain ordinary window glass.

**SHEETING OR SCAFFOLD BOARDS.** The boards or planks forming the gangway or platform.

**SHEETING.** Boards or planks used to keep the sides of an excavation from falling in.

**SHEET IRON.** Iron in sheets or plates and under a quarter of an inch thick or less than No. 4 B.W.G., *i.e.*, .239 inch.

**SHEET LEAD.** Lead in thin sheets, as used for covering flat surfaces.

**SHEET PILES OR FLAT PILES.** Thick boards, planks or timbers driven into the soil in close contact, to enclose a space to prevent leakage, etc.

**SHELF.** A board fixed horizontally against a wall, etc., and usually supported by brackets; a flat projecting layer of rock; a ledge of rocks.

**SHELL.** A coffin in its first stage of manufacture.

**SHELL.** The outer or superficial parts of a building, etc. Same as Carcase.

**SHELLAC.** A resinous substance produced by melting crude lac and straining it through a cloth.

**SHELL LAC.** Consists of seed lac melted, strained and compressed into sheets; it is softer, paler and purer than "seed lac" or "stick lac"; used in making lacquers.

**SHELL LIME.** Lime obtained by burning shells.

**SHELL MARBLE.** That which derives its figure from embedded fossils, encrinites or fossils of ordinary shells.

**SHELL MARL.** A deposit of shells which have been disintegrated into a mass.

**SHELVING.** Materials for shelves; sloping; furnished with shelves.

**SHIDE.** See Shingle.

**SHIELD.** In Scotland, applied to an escutcheon.

**SHIELD.** In heraldry, the escutcheon or field of a coat of arms.

**SHIFT.** A spell or turn of work; sometimes used for the workmen themselves, collectively, as the "night shift".

**SHILF.** Slate broken into small pieces; frequently employed for mending roads in Cornwall.

**SHINGLE.** Loose pebbles or coarse sand on the sea shore.

**SHINGLES OR SHIDES.** Slabs of split oak; formerly much used for covering church spires and high pitched roofs.

**SHINGLING.** Consists of placing lumps or balls of iron formed in the puddling furnace under a helve or tilt hammer which forces out the cinder and consolidates and welds the particles of ore together, thus forming the "bloom".

**SHIPPERS.** Applied to stock or clamp burnt bricks not quite perfect in form; sometimes exported as ballast, hence the term.

**SHIPPING TON.** Of timber, contains forty-two cubic feet.

**SHIVER.** A variety of blue slate.

**SHIVERS.** Stone chippings.

**SHIVERS.** Thin slices of wood used for filling in shakes in timber.

**SHIVER SPAR.** A carbonate of lime; so called from its slaty structure.

**SHOCK.** The effect of an electric discharge on the system.

**SHOD.** A pile, etc., is said to be "shod" when having an iron shoe, and is referred to as being shod with iron.

**SHODDY.** Jerry building, inferior or scamped work.

**SHODDY, SHODDIES.** Squared stones under twelve inches deep; used in ashlar work.

**SHODDY WORK.** That in which shoddies are used; jerry building.

**SHOE.** A term applied to any metal socket or covering for the lower end of a timber, as a pile jamb, etc.

**SHOE.** A bend for the bottom of a rain-water pipe to turn the water from the wall.

**SHOE.** A drag or skid.

**SHOOK.** Same as Shaky.

**SHOOK.** A bundle of boards for boxes.

**SHOOT.** To plane the edges of a board straight and square.

**SHOOT.** To deposit rubbish by tipping out of carts; an inclined trough down which material is shot.

**SHOOTING.** The act or method of planing the edges of boards

straight, square and out of winding ; rain-water piping.

**SHOOTING BOARD.** Two boards joined together with their sides lapped upon each other so as to form a wide rebate to slide a trying plane along in "shooting" ; used by joiners for making joints in thin panels.

**SHOOTING BOX.** A temporary residence, generally in the form of a bungalow, for sportsmen during the shooting season.

**SHOP.** A building in which goods are offered for sale ; a building in which mechanics or artisans work.

**SHORE.** A large timber used to prop or support a building.

**SHORING.** A method of propping up buildings with shores ; one-third the value of the timber is allowed for use and waste.

**SHORT CIRCUIT.** If two wires of opposite polarity, feeding lamps or other consuming devices, be joined by a good conductor of comparatively low resistance, an easier and therefore shorter circuit than that of the lamps, etc., is established, and this the current will take by reason of its lower resistance.

**SHOULDER.** The plane or surface from which a tenon springs.

tenon.  
shoulder.

**SHOULDER.** In fortifications, the angle of a bastion.

**SHOULDERED.** Having shoulders.

**SHOULDERED SLATES.** Those which are bedded for about two inches at their heads in hair mortar, mixed with cool ashes, to give it a slate colour.

**SHOULDERED TENON.** A tusk tenon.

**SHOW BOARD.** The window board of a shop front, for the exhibition of the goods in the window.

**SHOW CASE.** A case or kind of cupboard, generally portable and liberally fitted with glass, for the exhibition of goods ; made in various forms.

**SHOW ROOM.** A well-lighted and generally lofty room for the exhibition of goods for sale.

**SHREAD HEAD.** Same as Jerkin Head.

**SHREDDINGS or FURRINGS.** In old buildings, short, slight pieces of timber fixed as bearers below the roof, forming a straight line with the upper side of the rafters.

**SHRINE.** A tomb or decorated monument.

**SHRINK.** Called "cling" in Scotland ; contraction, as of timber, etc.

**SHRINKAGE.** The amount of the contraction ; a shrinking or contraction into a smaller compass.

**SHROUDS.** A term sometimes applied to the crypt of a church.

**SHUFFS.** Unsound bricks full of shakes or cracks.

**SHUNT.** A by-path from the "main circuit" ; usually of higher resistance than the other.

**SHUTE or SHOOT.** A wooden trough for discharging water from a building.

**SHUTTER.** A close cover for a window, generally in the form of wood framing, or if in shops, in the form of a "revolving shutter" (which see).

**SHUTTER BAR.** An iron bar for securing an inside shutter or folding shutter.

**SHUTTER BLIND.** Same as Venetian Shutter or Jalousie.

**SHUTTER LATCH.** A turnbuckle for securing shutters when open.

**SHUTTING STYLE.** That on which the lock, etc., is fixed.

**SIDE BOX.** A box or enclosed seat in a theatre at the side of the stage.

**SIDE CUT or CUTTING.** A road, canal or path branching out from the main one.

**SIDED TIMBER.** Consists of the trunk of a tree split down and roughly formed to a polygonal section.

**SIDE GUTTER.** One formed on the slope of a roof next the gable.

**SIDE KEY.** A nail in the form of a wedge ; used for securing a channel tile.

**SIDE LIGHT.** A light or side window ; as in a vestibule, screen, etc.

**SIDE OF A CONE.** Any straight line drawn from the vertex to a point in the circumference of the base.

**SIDE POSTS.** Truss posts placed in pairs; used to support the principal rafters, etc.

**SIDERITE.** The loadstone; a phosphate of iron; ironwork.

**SIDEROSCOPE.** An instrument for detecting iron in any substance.

**SIDEROXYLON.** A genus of trees remarkable for the hardness and weight of their timber.

**SIDE TIMBERS.** A term applied in Somersetshire to purlins.

**SIDE VIEW.** An oblique view.

**SIDEWALK.** A raised footway; a pavement.

**SIDE WEVERS.** Same as Purlins; so called in Lincolnshire.

**SIDE-WEDGE BRICKS.** See Arch Bricks.

**SIDING.** A short line of rails to shunt railway trucks on.

**SIDINGS.** An American term for weather boarding; passing places or lines of rails for carriages not in use in railway engineering.

**SIENITE.** See Syenite.

**SIENNA.** A yellow pigment containing manganese as well as iron; somewhat browner in tint than yellow ochre.

**SIEVE.** A wire-bottomed appliance for separating the finer particles of any substance from the coarser, as gravel, etc.

**SIGN BOARD.** A notice board; an advertising board.

**SIGN POST.** A post on which a signboard hangs.

**SILICA.** Oxide of silicon.

**SILICATE.** A salt of silicic acid.

**SILICATE COTTON or SLAG WOOL.** A mineral glass-like fibre blown or manufactured from blast furnace iron slag; very light, vermin proof, incombustible, non-conductor and non-radiator of heat and cold; used for making floors, ceilings, etc., sound and fireproof.

**SILICATED STONE.** An artificial stone made in a similar way to Victoria stone.

**SILICATE OXIDE PAINT.** That prepared from an iron ore found in

Devonshire; made in three colours only, black, red and yellow.

**SILICATE PAINTS.** Those having for their basis a very pure silica, obtained from a natural deposit in the west of England; levigated, calcined and mixed with resinous substances.

**SILICATE TOPISSA.** A liquid for coating external walls or new plaster or damp internal walls; can be obtained either white, brick-red, stone colour or transparent.

**SILICON.** A non-metallic elementary substance, which, when oxidised, becomes silica.

**SILL, CILL or SOLE.** Usually applied to any horizontal piece of timber or stone forming the bottom of a window, doorway or other similar opening.

**SILLIMANITE.** A mineral chiefly composed of silica and alumina.

**SILLON.** In fortifications, a mound raised in the middle of a moat for defence when too wide.

**SILLO.** A pit built below the surface of the ground; used for storing fodder, etc.

**SILT.** The deposit in water of mud or sand.

**SILURIAN.** The fossiliferous strata below the old red sandstone.

**SILVERED PLATE.** Plate glass coated with quicksilver on one side, to form a mirror.

**SILVER FIR.** A species of fir; valuable for its resin.

**SILVER GRAIN.** See Medullary Rays.

**SILVER SOLDER.** A mixture of silver with copper or brass in varying proportions.

**SIMILOR.** An alloy of copper and zinc; made to imitate gold.

**SIMPLE VAULT.** That formed by the surface of some regular solid round one axis.

**SINE.** A straight line drawn from one end of an arc perpendicular to the diameter drawn through the other end.

**SINGLE or NAIL WELT.** The edge of a sheet of lead turned back so as to cover the heads of a row of nails previously driven in to secure the edge of the sheet.

**SINGLE AXED.** Consists of stone having the inequalities left by the pick reduced by an axe.

**SINGLE ENTRY.** In book-keeping, an entry of a transaction into one account only.

**SINGLE FACED ARCHITRAVE.** That having its outer edge square and its face one unbroken line.

**SINGLE FLOOR.** That in which the joists run from wall to wall and support the ceiling under and carry the floor boards above.

**SINGLE HUNG.** Implies that only one sash is hung, generally the bottom one.

**SINGLE HUNG.** A single hung door is one hung in one piece, as distinguished from one hung folding. Single hung when applied to sashes means that one of the pair is fixed.

**SINGLE JUNCTIONS.** Those made to form a joint when one drain or other pipe enters the side of another.

**SINGLE LATHS.** In plastering, one about three-sixteenths of an inch thick.

**SINGLE MEASURE.** A term formerly applied to a door, square on both sides, *i.e.*, with no mouldings in the panels.

**SINGLE REBATED LININGS.** Those having a rebate to receive the door only.

**SINGLE RIVETING.** A single row of rivets uniting metal plates.

**SINGLES.** A term applied to gas retorts with a mouthpiece.

**SINGLES.** Roofing slates of the size 12 × 8 or 10 × 8 inches.

**SINGLE SHEAR STEEL.** That produced by cutting bars of blister steel into short lengths and piling them into a bundle or faggot, sprinkled with sand and borax and placed at a welding heat under a tilt hammer and beaten into a bar.

**SINK.** A basin or trough of wood or stone to receive dirty water.

**SINK HOLE.** A hole for dirty water to run through.

**SINKING.** A "sinking" is a small panel, etc., sunk or cut out of the solid material, as in a newel, etc.

**SINKING.** Subsiding, as a wall, etc.

**SINOPLE.** In heraldry, the colour green.

**SINOPLE.** Red ferruginous quartz.

**SINUOSITY.** A series of bends and turns in arches or other irregular figures; the quality of curving in and out.

**SIPHON.** A bent tube or pipe with one end longer than the other; used for drawing off fluids.

**SIPHON or SYPHON.** In sanitary work, a double bend in a pipe.

**SIPHON or SYPHON.** In gas-fitting, a contrivance for collecting water accumulating in the pipes.

**SIPHONAGE or SYPHONAGE.** The action of a siphon; also applied to the action when a partial vacuum is set up in a drain, causing the trap to become unsealed.

**SIPHONIC or SYPHONIC.** Pertaining to a siphon.

**SIPHUNCULATED.** Having a little siphon or spout, as a valve.

**SITE.** The situation of a building; the plot of ground on which it stands.

**SITTING.** A seat in a pew of a church.

**SIXPENNY NAILS.** Generally means nails about one and a half inches long.


**SIZABLE.** (Scotch term.) Of ordinary size, not "undersized," of slates.

**SIZE (Thin Glue).** Made by boiling down horns, skins, etc.; to prepare or cover with size.

**SIZE COLOUR.** Same as Distemper.

**SIZED.** Said of work having had a coat of size.

**SIZING.** The act or method of covering with size.

**SKELETON BRACKET.** Small trusses consisting of a vertical piece, a horizontal piece and a strut: .

**SKELETON FLASHING.** Formerly applied to stepped flashing.

**SKELETON FRAMED.** That framed like a door, etc.

**SKELETON KEY.** A thin light key with the bits filed away, for picking locks.

**SKETCH.** A rough drawing; a slightly made drawing giving the general features but not the details; to draw the outline or general delineation of anything.

**SKREW.** Oblique.

**SKREW, SKEW TABLE, SPRINGER or FOOT STONE.** A stone built into the bottom of a gable, or other similar situation, to support the coping above; also called a "kneeler".

**SKEW ARCH.** That in which the head is oblique to the axis.

**SKEWBACK.** The inclined surface or joint upon which the end of an arch rests; the stones or bricks from which an arch springs and upon which the first arch stones are laid.

**SKEW BRIDGE.** A bridge built across a road or river at oblique angles.

**SKEW BUT, SKEW CORBEL.** Scotch terms applied to a knee stone.

**SKEW FLASHING.** The lead flashing along the side of a gable.

**SKID.** A piece of timber to keep one object from sliding upon another; a shoe with a chain to drag a wheel; to "skid" is to slide without revolving.

**SKID.** To "skid" is to slide with revolving; to slip.

**SKIFFLING.** The act or operation of knocking off rough pieces of stone. Same as Knobbling.

**SKILLING.** A slight addition to a cottage; a bay of a barn.

**SKILTING.** In Scotland, the term applied to a skirting; also called "washboard," "base" or "base-plate".

**SKIRTING, BASE or SKIRTING BOARDS.** The vertical boards running round the base of a wall of a room.

**SKIRTING.** The border next the wall round the top of a bath top, lavatory basin, etc.

**SKIRTS.** Of a roof, the projecture of the eaves.

**SKYLIGHT.** A light or window that lies flat on a roof, usually over a curb frame, the light being either fixed or hinged; applied to any light or window, other than dormers, placed in the roof of a building or room.

**SLAB.** An outside plank or board sawn from the sides of a tree or baulk; a thin, flat piece of marble or other stone.

**SLAB.** A slate from one to three inches thick, containing ten to thirty feet superficial.

**SLACK.** Said of a door, sash, drawer, etc., when too much has been planed off to allow of its fitting properly.

**SLACK.** To lose cohesion; to become less tense; the loose part of a rope; small coal.

**SLACKEN.** A spongy, semi-vitrified substance mixed with the ores of metals to prevent their fusion.

**SLADE.** Formerly, a flat piece of low moist ground.

**SLAG.** The scoria or the dross of a metal after fusion in a blast furnace.

**SLAG BRICKS.** Those made by running molten slag into iron moulds.

**SLAKE.** To mix with water, as lime.

**SLAKED LIME.** Chemically known as hydrate of lime. Is lime reduced to the form of a powder, for building purposes, by having water mixed with it, or by the lime abstracting water from the atmosphere.

**SLAKING.** The process of chemical combination of quicklime with water.

**SLANT.** Sloping; oblique; inclined from the horizontal or perpendicular.

**SLANTING.** Obliquely; with a slope or inclination.

**SLAP.** (Scotch term.) An opening whence "slapping," *i.e.*, breaking through a wall to form a doorway, etc.

**SLAPDASH.** A term sometimes applied to rough cast.

**SLAT.** A narrow piece or slip of timber used to fasten boards together; also called a "ledge," "brace," etc.

**SLATE.** An argillaceous stone which readily splits into thin plates; used as a roof covering. The best slates come from Cumberland, Westmoreland, Bangor and Portmadoc. The Bangor slates are dark purple in colour, the Portmadoc a greenish-purple. The upper surface of a slate is called its "back," the under surface its "bed," the top edge the "head," the bottom the "tail," the part exposed to view when hung or

fixed the "margin," the width of the margin is the "gauge," and the "lap" is the distance which the "tail" of the third course overlaps the "head" of the first. The sizes and names of slates in general use are :—

	Inches.
Countesses . . . . .	20 × 10
Doubles . . . . .	13 × 6
Duchesses . . . . .	24 × 12
Empresses . . . . .	26 × 16
Imperials . . . . .	30 × 24
Plantations . . . . .	13 × 10
Princesses . . . . .	24 × 14
Queens . . . . .	36 × 24
Ladies (large) . . . . .	16 × 8
" (small) . . . . .	14 × 12
Marchionesses . . . . .	22 × 12
Singles or Smalls . . . . .	12 × 8
Viscountesses . . . . .	18 × 9 and 18 × 10

**SLATE AXE.** A small axe with one end pointed; used by slaters in slating.

**SLATE BOARDING.** Close boarding for supporting slates.

**SLATER.** One whose occupation is to slate buildings, *i.e.*, the roofs.

**SLATE RIDGE.** Slate specially prepared for covering a ridge; it usually consists of a roll on top of two wings or leaves, fitting the inclinations of the roof.

**SLATING.** The act or method of covering with slates; materials for slating; a covering of slates.

**SLATING BATTEN.** The wood fillet to which the slates are nailed.

**SLATING NAILS.** Have circular, flat heads, sometimes slightly countersunk, and sharp-pointed shanks; made of various metals.

**SLATS.** The thin pieces of wood forming the body of a Venetian blind. They are supported by the "ladders" so that they can be inclined in various ways at will.

**SLATT.** A thin slab of stone; formerly used instead of slates for covering roofs.

**SLATY.** Having the nature or properties of slate.

**SLAUGHTER HOUSE.** A place where beasts are killed for food; an abattoir.

**SLEDGE.** A large, heavy hammer; chiefly used by smiths.

**SLEDGE HAMMER.** A sledge.

**SLEEPER or SLEEPER PLATE.** A piece of timber laid under the ground floor of a building, on which the joists rest, the walls which usually support them being called "sleeper walls".

**SLEEPER.** The timber supporting the rails of a railway.

**SLEEPER WALL.** A low wall for supporting the joists on a ground floor. See Sleeper or Sleeper Plate.

**SLEEPINESS.** In timber, is caused by artificial seasoning; all the nature of the wood appears to be taken out of it; appears of a dull lustreless colour; dusty when being planed.

**SLEEVE.** A short piece of pipe fitted outside a rod or a pipe to make it fit another. The opposite of "bush".

**SLICKENSIDES.** Smooth, polished surfaces of fissures or faults in rocks; a vein of clay producing dislocation in rocks; also applied to a variety of galena in Derbyshire.

**SLIDE.** A small sliding shutter or sliding cover.

**SLIDE RULE or SLIDING RULE.** A superior kind of joiner's rule having a narrow brass slide, for working arithmetical and mathematical calculations on logarithmic principles.

**SLIDES or SLIDING PLATES.** In blind-making, the slotted plates which the arm irons work on to give more head room.

**SLIDING SCALE.** A slide or sliding rule.

**SLIDING SHUTTERS.** Those in which the flaps or leaves slide laterally into recesses formed on each side of the window, or vertically into a recess formed below the window board and hung with weights similar to a sash.

**SLIDING SUCTION PIPES.** A telescopic form of pipe of great use in sinking work; largely used with the pulsometer or other portable steam pumps.

**SLIME.** Soft, moist, adhesive earth; bitumen.

**SLIME PIT.** A pit for slime.

**SLING.** A connecting piece for jointing a crank pin to a pump rod.

**SLIP.** A small hone for sharpening gonges, etc.

**SLIP BOARD.** A board sliding in grooves.

**SLIP FEATHER.** A lath or tongue placed in a groove when jointing boards together.

**SLIP JOINT.** A joint formed by cutting a chase in an old wall when fitting a new one to it.

**SLIP-OFF BUTT HINGES.** Those employed where a door, etc., is required to be taken off occasionally.

**SLIT DEAL.** A one and a quarter inch deal cut into two boards; fir boards a full half-inch thick.

**SLITTING MILL.** A mill where iron bars are slit for various purposes.

**SLOAM.** A layer of clay between coal.

**SLOAT.** Same as Slat.

**SLOP BRICK or SLOP MOULDED.** That when in moulding bricks by hand the moulds are sometimes dipped into water just before being filled with clay, to prevent its adhering to the mould.

**SLOPING.** Oblique; inclining from the horizontal or perpendicular.

**SLOPPING OUT.** A method of casting lead traps by running the molten lead into iron moulds.

**SLOP SINK.** A sink for emptying slopes into.

**SLOPS.** Used water from bed-rooms, sculleries, etc., containing no solids.

**SLOT.** A hole or mortise, thus,



; a hole longer than it is broad, to allow a bolt which passes through it to slide slightly, as in a "flush bolt".

**SLOT.** Same as Sloat or Slat; also applied to a small mortise round a screw to allow boards when screwed to shrink without splitting.

**SLOTE.** A trap-door in the stage of a theatre.

**SLOT SCREW.** A screw having a mortise round it to allow the boards to shrink.

**SLOT SCREWED.** Having a slot, or the method of slot screwing.

**SLUDGE.** The comparatively solid deposit from liquid sewage after separation from liquid mortar.

**SLUICE.** A water gate; a flood gate; a vent or outlet for water.

**SLUICE VALVE.** A kind of sliding shutter put in motion by means of a screw; generally used for cast-iron pipes.

**SLUICE VALVE.** A valve, similar to a sluice, on an iron pipe.

**SLURRY.** Chalk and clay mixed in water to a condition of a creamy liquid, for the manufacture of cement.

**SMALL ASHLAR.** That in which the stones are less than one foot thick.

**SMALLS or SINGLES.** Slates twelve by eight inches.

**SMALT.** Glass tinged of a deep blue; a blue pigment made from smalt.

**SMALTINE.** Tin-white cobalt.

**SMELT.** To melt or separate metal from extraneous substances.

**SMELTING.** The act or operation of melting ores to obtain the metal.

**SMELTING FURNACE.** A furnace for smelting ores.

**SMIDDY.** Scotch term for a smithery or smith's workshop.

**SMITH.** One who works in metals; one who forges with a hammer.

**SMITHERY.** The work or the workshop of a smith.

**SMITHING.** The art or act of working iron into shape.

**SMOCK MILL.** A windmill whose top is the only part which turns to meet the wind.

**SMOKE BLACK.** A black, sooty substance produced from the fumes of certain resinous bodies.

**SMOKE BOARD.** A board before the upper part of a fireplace to increase the draught.

**SMOKE BOX.** The end of a boiler on which the chimney is placed.

**SMOOTHING PLANE.** A joiner's plane for smoothing and finishing work.

**SMUDGE.** A black stain made of lampblack, glue and sour beer or chalk; used for painting lead where, in soldering, the solder is not required.

**SNACKET.** A provincial term for the hasp or fastening of a casement.

**SNAP HEADER OR BLIND HEADER.** In brickwork, a header that does not run through the whole length of the brick.

**SNAPPED FLINT WORK.** Applied to walling built of roughly squared flints split in half.

**SNAP RIVETS.** Those having their points formed, while the iron is hot, by a tool containing a nearly hemispherical hollow.

**SNATCH BLOCK.** A block (for hoisting) with an opening on one side to receive the bight of a rope; the movable pulley in a crane to which the weight is attached.

**SNECK.** Scotch term for a latch.

**SNECKED RUBBLE OR SQUARE OR IRREGULAR SNECKED RUBBLE.** That in which the stones are not built in courses, but with stones of any size, with here and there a larger stone.

**SNECK HEAD.** A Scotch term for the catch of a latch.

**SNIFTING VALVE.** A valve in the cylinder of an engine for the escape of air.

**SNIPE'S BILL.** A joiner's plane; used for forming quirks.

**SNOW BOARDS.** Perforated boards laid the full width of a gutter, leaving a space of two or three inches underneath to allow the water to run away when the thaw comes; snow boards are frequently made with battens.

**SNOW PLOUGH.** A machine for clearing away the snow from roadways.

**SNUG.** Applied in some towns to a smoke-room in public houses.

**SNUG.** A good fit. Same as Lug, which see.

**SOAKER.** A sheet of lead placed over any part which cannot easily be otherwise protected from the weather.

**SOAKERS.** Pieces of lead cut to the length of slates and frequently worked in with them for about half their width, the rest being turned up against the wall and covered by a raking or step flashing.

**SOAKING.** A method of hardening cutting tools by finishing off the heating process very slowly so as to bring every part to a uniform heat.

**SOAPS.** Bricks nine inches long, two and a quarter inches wide, and two and a quarter inches thick.

**SOAP STONE.** A magnesian mineral.

**SOCKET.** A short, connecting length of iron pipe with a female thread.

**SOCKETS.** The angular mortises to receive the pins or dovetails in dovetailing.

**SOCKET CHISEL.** A joiner's chisel; so called from the iron forming a socket to receive a wooden handle.

**SOCLE OR ZOCLE.** A plain block or plinth forming a low pedestal to a column, statue, etc.; also a plain face or plinth at the lower part of a wall.

**SODA.** The protoxide of sodium; carbonate of soda; used in the manufacture of glass, etc.

**SODIUM.** The metallic base of soda.

**SOFFIT.** A ceiling; the under surface of any projecting moulding or member exposed to view; the inner or concave surface of an arch; a small ceiling formed into panels, as over windows, etc.

**SOFFIT.** Of a mutule, the under side of the block of a mutule, generally having guttæ or drops depending from it.

**SOFFIT.** Of a modillion, the under surface, generally having in the alternate square a richly sculptured rose.

**SOFFIT LININGS.** Those covering the soffit or underside of the lintel or arch over a door or window opening; or that lining covering the soffit or underside of a flight of stairs when exposed to view.

**SOFT BRICKS.** Sometimes called "salmon" and "pale bricks"; are those forming the exterior of a kiln; being underburnt they are too soft for ordinary work.

**SOFTENING.** In painting, the blending of colours with harmony.

**SOFT MUD BRICK.** One moulded from clay which has been reduced to a soft mud by adding water.

**SOFT SOLDER.** A mixture of tin and lead.

**SOIL.** Earth; the contents of a cesspit; smudge.

**SOILED.** In plumbing, a method of painting the ends of pipes about to be "wiped" with smudge.

**SOILING AND SEEDING.** Laying vegetable earth on new embankments and sowing with grass seed.

**SOIL PIPE.** The pipe that conveys the contents of water-closets to the drain, and also the contents of waste pipes; a waste pipe.

**SOILS.** A term formerly applied to the principal rafters of a roof.

**SOLAR or SOLLAR.** An upper chamber or loft.

**SOLDER.** An alloy for making joints in metal; to unite by solder.

**SOLDERED DOT.** A method of securing lead to boarding by dressing the lead down into a cavity formed in the boarding to receive the head of a screw which is run over with solder and finished flush with the surface forming the "soldered dot".

**SOLDERING.** The act or process of uniting metals by solder.

**SOLDERING BOLT.** A tool for applying solder.

**SOLDERING CLOTH.** A pad made of several pieces of cloth; used by plumbers for wiping a soldered joint.

**SOLDERING FLUID.** A concentrated solution of chloride of zinc.

**SOLDERING IRON.** An iron instrument with a bulb at one end and a hook at the other; used for supplying heat in finishing lead joints with coarse solder; also called "grozing," "bossing" or "round irons," "plumber's iron" and "soldering bolt".

**SOLDERING PASTE.** The name given to a semi-liquid mass produced by mixing a solution of zinc chloride or one of ammonia with starch paste.

**SOLDIERS.** Vertical sheeting, especially when made of iron plates with flanges.

**SOLE.** A Scotch term for a sill.

**SOLE PIECE.** The bottom horizontal timber of a dead or raking shore, which rests on the ground.

**SOLID.** Cubic.

**SOLID ANGLE.** An angle formed by three or more angles; any angle formed by the material being "returned in the solid".

**SOLID BEARING.** See Bearing Wall.

**SOLID BRIDGING or SOLID STRUTTING.** Short boards or pieces of stuff fixed between joists to stiffen them.

**SOLID CONTENTS.** The cubic contents, in inches, feet, yards, etc.

**SOLID FRAME or WINDOW.** That in which the jambs, head, etc., are solid, *i.e.*, not boxed like a sash frame.

**SOLID PANEL.** A panel the same thickness as the framing, thus finishing flush on both sides of the framing.

**SOLID RELIEF.** Relief formed in the solid material, *i.e.*, not pressed out from the back.

**SOLID ROLL.** In lead laying, that when the lead is dressed over a wood roll or bead.

**SOLIDS.** All bodies that have three dimensions—length, breadth and thickness.

**SOLIVE.** The French term for a joist, rafter or other timber either spilt or sawn.

**SOLUBLE.** Capable of being dissolved in a fluid.

**SOLVENT.** A liquid sometimes used to remove old paint.

**SOMMERING.** The splay or radiating joints of the bricks in arches.

**SONOMETER.** An instrument for testing the effects of sound.

**SOORKI.** The term applied to ground bricks in India.

**SOOT DOOR.** The small iron door in the side of a flue.

**SOREL STONE.** An artificial stone.

**SOUGH.** An adit or level for carrying off water.

**SOUGH, CHANNEL or GUTTER BRICKS.** Those having a channel formed in the middle for carrying off water, etc.; used in stables.

**SOUND.** Applied to drains, means that there are no leakages.

**SOUND BOARD or SOUNDING BOARD.** A wooden projection or canopy; usually placed over pulpits to diffuse the sound of the preacher's voice.

**SOUND BOARDING.** Boards laid between the joists of a floor to sup-

port some substance, as sawdust, etc., to prevent sound being transmitted from one storey or floor to another; called "deafening" in Scotland.

**SOUND HOLE.** In church towers, the small ornamental openings for giving passage to the sound of the bells.

**SOURCE.** The spring or fountain from which a stream of water flows.

**SOUSE, SOURCE or SOUCE.** A support or under prop.

**SOW.** An oblong piece of metal; same as a pig.

**SOW.** The centre channel from which the "pigs" branch off, in running cast iron from the blast furnace.

**SPA.** A spring of mineral water; a building for the consumption of it.

**SPACE.** Room; clearance.

**SPADDE.** A little spade.

**SPALL.** A large chip of stone.

**SPALLER.** Tin ore as it is brought out of the mines, *i.e.*, before the metal is extracted.

**SPALLS.** The refuse or chips left after working stones.

**SPALLS, SHIVERS or FILLINGS.** In rubble walling, chips of stone filled in the joints to avoid a thick bed of mortar.

**SPAN.** A "span" is nine inches or a quarter of a yard or half a cubit.

**SPAN.** The breadth or width of an arch or opening between the imposts or jambs or abutments. Same as Chord.

**SPANDREL or SPANDRIL.** The triangular space enclosed by a horizontal line from the crown of an arch and a perpendicular line from the springing; the triangular piece of framing under a staircase; also called the "spandrel framing" and in some towns a "drag".

**SPANDREL BRACKETING.** A cradling of brackets fixed between one or more curves each in a vertical plane, and in the circumference of a circle whose plane is horizontal.

**SPANDREL FILLING.** The material used in forming or filling in a spandrel.

**SPANDREL FRAMING.** A triangular panelled framing for filling a spandrel, as in stairs, etc.

**SPANDREL STEPS or FEATHER EDGE STEPS.** Stone steps having the lower side cut away, parallel to line of nosings, so as to form a raking soffit.

**SPANISH or CUBA MAHOGANY.** That obtained from the island of Cuba; distinguished from other varieties by a white chalk-like substance filling the pores; sound, generally free from shakes and knots, with a wavy grain or figure; used for superior joinery.

**SPANISH BLACK.** A soft black pigment produced from burnt cork.

**SPANISH BROWN.** An ochre produced from a natural earth.

**SPANISH RED.** An ochre somewhat similar to Venetian red.

**SPANISH WHITE.** A white earth obtained from chalk; used in paints.

**SPANNER.** An instrument used to tighten or turn the nuts upon bolts.

**SPANNER HANDLE.** A lever or handle for turning a stop cock, with a square head which fits into a square hole in the handle.

**SPAN PIECE.** A term sometimes applied to the collar beam of a roof truss.

**SPAN ROOF.** A roof in which the two sides are inclined and meet at the apex.

**SPAR.** A term now almost exclusively applied to the common rafters of a roof; used perhaps more in the North than the South.

**SPAR.** An easily and regularly frangible mineral.

**SPAR PIECE.** A term sometimes applied to the collar beam of a roof.

**SPARS or POLES.** Small scaffold poles, or trees having a circumference of less than twenty-four inches at the base.

**SPARS.** In thatching, split twigs used to secure each "hellam" to the row beneath.

**SPARGE PIPES.** The horizontal, perforated, water-discharging pipes for flushing urinals; fixed at the back or sides and connected with an ordinary cistern; also called "weepers".

**SPARRY.** Resembling or consisting of spar.

**SPARRY IRON.** Carbonate of iron.

**SPARVER.** See Sperver.

**SPATHIC ORE.** A crystallised carbonate of iron, generally mixed with lime, yielding about 37 per cent. of iron; found in Durham, Devonshire and Somersetshire.

**SPAWLED MASONRY.** A term used in Ireland for uncoursed rubble work.

**SPEARED BARS.** Vertical iron bars in a railing having their tops in  $\uparrow$  form.

**SPEAR HEADS.** The tops of the vertical bars in an iron railing when of spear form.

**SPECIALIST.** An expert, or one who devotes himself to a special branch of a science.

**SPECIFICATION.** A description of the materials and workmanship, etc., to be used and employed in the erection of a building or other work.

**SPECIFIC GRAVITY.** Of timber or other body, is the ratio of the weight as compared with an equal weight or quantity of water.

**SPECIFIC HEAT.** The quantity required to raise equal weights of different bodies through equal intervals of temperature.

**SPECIFY.** To mention or name particularly, as by a clause in a specification.

**SPECULAR IRON.** An ore of iron occurring frequently in crystals of a brilliant metallic lustre.

**SPECUS.** In ancient architecture, the canal into which the water flowed in aqueducts, raised above the surface of the ground and constructed of hewn stone or bricks.

**SPEISS.** A German term applied to a residue of nickel, arsenic, etc., found in crucibles in which cobalt glass has been melted.

**SPELK.** A small stick used in thatching; a splinter in Scotland.

**SPELTER.** Hard solder.

**SPELTER.** The commercial name for zinc before it is converted into the sheet or other forms; zinc in ingots.

**SPELTER SOLDER.** Hard solder, consisting of copper and zinc in pro-

portions differing according to requirements

**SPENT CEMENT.** A term applied when cement has lost its setting power by exposure.

**SPERE.** A small screen fixed at right angles to a door jamb to prevent the interior of the room being seen when the door is opened; in the Middle Ages the term was applied to the screen at the lower end of a hall in private dwellings.

**SPEEVER.** The wooden frame at the top of a canopy or bed.

**SPHÆRISTERIUM.** A tennis court.

**SPHÆRULITE.** A brittle mineral chiefly composed of silica and alumina.

**SPHENE.** A mineral of foliated texture composed of silicic acid, titanitic acid and lime.

**SPHERE.** A globe or solid body contained under a single surface, each point in which is equidistant from a central point.

**SPHERICAL ANGLE.** An angle formed on the surface of a sphere by the arcs of two circles.

**SPHERICAL BRACKETING.** That formed to support lath and plaster, the surface of which forming the surface of a sphere.

**SPHERICAL GEOMETRY.** That branch of geometry which treats of spherical magnitudes.

**SPHERICAL TRIANGLE.** A figure bounded by the arcs of three circles which intersect each other.

**SPHERICAL TRIGONOMETRY.** The resolution and calculation of the sides and angles of spherical triangles.

**SPHERICLE.** A small sphere.

**SPHERICS.** Spherical geometry.

**SPHERO-CYLINDRIC ARCH.** That formed when a portion of a cylinder pierces a sphere of greater altitude than the cylinder.

**SPHEROID.** A figure approaching to a sphere but not perfectly spherical.

**SPHEROIDAL BRACKETING.** That formed so that the surface of the plaster forms a surface of a spheroid.

**SPHEROMETER.** An instrument for measuring the thickness of small bodies or the curvature of round ones.

**SPHEROSIDERITE.** Carbonate of iron in spheroidal masses.

**SPHERULE.** A small sphere or globe.

**SPHINX.** A fabulous monster, of Egyptian origin, represented as having the body of a lion and the face of a woman.

**SPIEGELEISEN or MIRROR IRON.** A variety of cast iron, rich in carbon and manganese.

**SPIGOT.** A peg to stop a vent hole; a tap for drawing off liquor, especially if of wood.

**SPIGOT END.** The socketed end of a pipe which fits into the socket of the next pipe.

**SPIKES.** Large wrought nails from four to fourteen inches long; the smaller sizes have rose heads, and the larger ones square heads with flat tops; used for heavy work where great strength is required.

**SPILE, SPILL.** A stake driven into the ground to protect a bank; a small peg used to stop a hole.

**SPINDLE.** A slender pointed rod or pin on which anything turns.

**SPINDLE.** In machinery, a revolving axis of smaller size than a shaft.

**SPINDLE.** A small turned wood pillar not more than six inches high.

**SPINDLE VALVE.** A valve in the bottom of a cistern worked by means of a wire.

**SPIKE.** The name given to the mature wood of a tree, the outer layer being called alburnum or sapwood.

**SPIRA.** The base of a column.

**SPIRAL.** A curve making any given number of revolutions round a fixed point without meeting itself; the point is called the centre or eye of the spiral; a line drawn from the point to the curve of the spiral being called an ordinate; winding like a screw; pointed like a spire.

**SPIRAL OF ARCHIMEDES.** A spiral in which the arc passed over by the radii is always in a ratio to the difference of the ordinates.

**SPIRAL STAIRCASE, TURNPIKE, VISE, TURNGRECE or WINDING STAIR.** Consists of a series of winders; generally made of iron or

stone and only used in confined spaces, as in towers, etc.

**SPIRE or STEEPLE.** That which terminates in a point at the top or apex, in contradistinction to a tower, which is generally square, circular or flat.

**SPIRE.** In ancient architecture, the base of a column and sometimes the astragal or torus.

**SPIRE.** A winding line, like the threads of a screw; a curl; a twist; a wreath; a round pyramid; a tapering body.

**SPIRIT LEVEL.** An instrument for obtaining an exact horizontal line by means of a bubble of air in a tube filled with spirit of wine.

**SPIRIT VARNISH or LACQUER.** That produced from soft gums, such as lac and sandarach, dissolved in spirits of wine or pyroligneous spirit; becomes harder, more brilliant, and dries more quickly than turpentine varnish, but is apt to crack and scale off; used chiefly for interior work.

**SPIT.** A "spit deep" is the distance to which the ordinary spade is thrust in from the surface of the soil.

**SPITAL.** A hospital.

**SPLAY.** A term applied to slanting or sloped surfaces, such as cants, bevells, etc.; windows and other openings in walls, etc., are said to be "splayed" if the opening is wider on the face of the wall than it is on the inside.

**SPLAY BRICKS or SLOPES.** Those bevelled off on one corner.

**SPLAYED DRIP.** That when the lead is dressed on the level to form a drip.

**SPLAYED GROUNDS.** Those splayed on the edge next the plaster, so as to form a key for it.

**SPLAYED HEADINGS.** In flooring, consists of the heading or butt joints of the floor boards being cut to a splay or bevel.

**SPICE.** A joint in a small timber, the ends being bevelled, laid side by side and the whole lashed together.

**SPLIT PIN or SPLIT KEY.** A small iron or steel pin split up the centre; used for various purposes.

**SPLITS.** Are bricks of the ordinary area but thinner, say one and a half or two inches in thickness.

**SPLITTERS.** Small narrow chisels used by masons, made of various sizes, the heads being concave or cup headed ; chiefly used for carving, lettering, etc.

**SPOIL.** The earth, etc., dug out of an excavation.

**SPOKE.** The radius or ray of a wheel ; the spar, rung or round, or step of a ladder.

**SPOKESHAVE.** A joiner's tool, used with both hands, for dressing curved work.

**SPOUT, SHUTE or GARGOYLE.** A projecting spout used to throw the water from the gutter of a building off the wall ; sometimes applied to an ordinary rain-water pipe.

**SPRAG.** A stout bar of wood.

**SPREAD EAGLE.** In heraldry, the figure of an eagle with its wings elevated and its legs extended.

**SPRIG.** A small nail without a head.

**SPRIGGING.** Temporary fastening of a sheet of glass into place, by means of brads, preparatory to putting.

**SPRING.** A curved pipe of less curvature than 90° ; to bend elastically.

**SPRING.** An elastic piece of metal used to return a door, etc., to position. Also see Springing Line, etc.

**SPRING BEVEL.** Of a rail, the angle made by the top of the plank, with a vertical plane touching the ends of the rail piece which terminates the concave side.

**SPRINGED.** In boarding a roof, the setting of the boards together with bevel joints to keep out the rain, etc.

**SPRINGER.** The bottom stone of an arch which lies immediately upon the impost, jamb or pillar, etc. ; the lowest voussoir or arch stone ; the bottom stone of the coping of a gable is sometimes called a "springer" or "springing stone".

**SPRINGER, FEATHER-EDGED.** The triangular wood fillet forming the abutment of a trimmer arch.

**SPRING HINGES or SWING CENTRES.** Those used for swing or self-closing doors.

**SPRINGING or SPRINGING LINE.** The impost or abutment or point from which an arch or curve springs or rises.

**SPRINGING COURSE.** The horizontal course of stones or bricks from which an arch springs or rises ; the row of stones upon which the first arch stones are laid.

**SPRINGING STONE.** See Springer.

**SPRING SNIB.** A Scotch term for a sash fastener.

**SPRING STEEL.** Blister steel heated to an orange red colour and rolled or hammered.

**SPRING STOCK LOCKS.** Stock locks fitted as draw back locks.

**SPRING WATER.** The result of the permeation of the water through the upper strata of land, then, reaching an impermeable stratum, it is stopped ; all springs are formed in this way.

**SPROCKET, SPLOCKET.** A triangular piece of timber.

**SPRUCE FIR (*Abies excelsa*).** Also called white deal, spruce or spruce fir ; it is only used for rough carpentry or common joinery ; imported in deals from Christiania, Gottenburg, etc.

**SPRUCE OCHRE.** A pigment of a brownish-yellow colour ; produced from a natural clay ; coloured by oxide of iron.

**SPRUNG.** Used in joinery when a joint, etc., has opened. See Sprunged.

**SPRUNG MOULDINGS.** In joinery, circular mouldings intersecting with straight mouldings at right angles.

**SPUD AND RING.** An iron ring round the bottom of a door jamb to prevent splitting whilst driving in the "spud" or dowel in the bottom.

**SPUR.** Carved timber work at the doorway of old houses to support a projecting upper storey.

**SPUR WHEEL or SPUR GEAR.** A wheel with cogs round the edge pointing from the centre.

**SQUARE.** A figure having four equal sides and four right angles ; at right angles, *i.e.*, "square".

**SQUARE.** Of flooring, slating, etc., is 100 superficial feet or 100 square feet; also applied to a "pane" or "square" of glass.

**SQUARE.** "Square" inches means superficial inches, etc. An area of four sides, with houses on each side.

**SQUARE.** An instrument of various forms, having one straight edge at right angles to another.

**SQUARE.** To "square" dimensions is to multiply them together. The term is applied generally to include cubing also.

**SQUARE AND FLAT.** A panel is square and flat when it is of uniform thickness, thinner than the framing and not surrounded with moulding.

**SQUARE BAY.** A bay window built on a rectangular plan.

**SQUARE CHAIN** = 10,000 square links, 10 square chains = 1 acre.

**SQUARE CUT SYSTEM.** In hand-railing, is the method of cutting the planks to form the wreaths; the cut and joints are always at right angles to the surface of the plank, hence the term "square cut".

**SQUARE DRIP.** That when the lead is dressed over the square edge of a piece of stuff, such as the drip in a gutter, etc.

**SQUARE EDGED JOINT.** That made without the assistance of a tongue, groove, etc.

**SQUARE FOOT.** 144 square inches.

**SQUARE HEAD.** A stop or bib-cock is provided with a square head for fitting into a square hole in a "spanner handle".

**SQUARE HEADING.** Heading joints in a floor cut off square.

**SQUARE MEASURE.** The square of a lineal measure; to "square dimensions" is to multiply two lineal measurements or dimensions together to obtain the superficial dimension.

**SQUARE ROD.** In brickwork, 272½ square feet, one brick and a half thick, or an equivalent quantity of other thicknesses.

**SQUARE ROOT.** Of a number, is that number which, when multiplied by itself, will equal the given number; it is usually expressed by the symbol  $\sqrt{\quad}$ .

**SQUARE SHUTE.** One of  $\sqsubset$  section.

**SQUARE STAFF.** A piece of wood fixed at the external angle of a projection in a room to strengthen the angle, which if formed in plaster would be more easily broken. Same as Arris Fillet.

**SQUARE STATUE, POLE or PERCH.** 272½ square feet.

**SQUARE WOODLAND POLE.** 234 square feet.

**SQUARE YARD.** Nine square feet.

**SQUARED.** A handrail wreath is said to be "squared" or "squared up" when it is brought to a width and thickness ready for moulding.

**SQUARED or SQUARING UP.** The method of bringing stuff, in joinery, to a width and thickness.

**SQUARED RUBBLE.** That in which the stones are of a rectangular shape on the face.

**SQUARED STONE MASONRY.** That in which the stones are roughly squared and dressed on the beds and joints.

**SQUARING ACROSS.** In joinery, the operation of transferring the required lines from the "setting out rod" to the material.

**SQUARING OUT.** In "quantity taking," when the dimensions are taken and recorded, they are multiplied together (or squared out) to obtain the total quantity, either superficially or cubically in those dimensions.

**SQUARING THE CIRCLE.** To determine the exact contents of a circle in square measure; to describe a square that shall be equal in area to a given circle.

**SQUINCH or SCONCE.** Small arches or projecting courses of stone formed across the angles of walls, etc.

**SQUINT.** An opening through the wall of a church cut or built in an oblique direction for the purpose of enabling people in the transepts or aisle to see the altar.

**SQUINT BRICK.** That moulded to form an obtuse angle.

**SQUINT CUTTING.** The method or act of cutting a brick to suit a squint quoin.

**SQUINT QUOIN.** That in which the angle is either acute or obtuse ; also called "splayed quoins".

**STABLE.** A building for the accommodation of horses, of more or less pretension.

**STABLING.** Stable accommodation.

**STACK.** A number of flues ; a tall chimney. Same as Chimney Stack, which see.

**STACK.** Of bricks, contains fifty cubic feet or 1,000 bricks.

**STACK.** Of timber, contains 108 cubic feet.

**STACK PIPE.** A rain-water pipe.

**STACK YARD.** A yard for stacks of hay.

**STADDLE.** A support ; a small tree left standing.

**STADDLE ROOF.** The roof or covering of a stack.

**STADIUM.** A Greek and also a Roman measure nearly equal to an English furlong ; also applied by the Greeks to an oblong arena.

**STAFF BEAD, ANGLE BEAD, QUOIN BEAD.** Those nearly circular in section and generally with a quirk on each side ; chiefly fixed to the angles of, brickwork to float the plaster to.

**STAFFORDSHIRE IRON, SCOTCH IRON, WELSH IRON, NEWCASTLE IRON, CLEVELAND IRON,** etc. Are all descriptions of bar and plate iron in the market ; varying considerably in quality ; some possess considerable strength and toughness, and being half the cost of best Yorkshire iron are used for ordinary purposes.

**STAFFORDSHIRE PIG IRON.** Varies very much in quality, the greater part being made from ores of other countries.

**STAFF RIVETS.** Those having conical points.

**STAGE.** A floor, storey or platform ; an elevated floor or platform, as a scaffold, etc. ; the floor or platform of a theatre on which the actors perform.

**STAGING.** A structure of boards and posts for support.

**STAIN.** A liquid preparation of various tints applied to the prepared smooth unpainted surface of

common wood, as deal, to imitate the more expensive kinds.

**STAIN.** A preparation of silver nitrate ; used largely for changing the colour of glass to yellow by the action of heat.

**STAINED ENAMELLED GLASS.** Consists of having the surface covered with enamel, which is rubbed off the parts to be coloured and treated with chemical substances and subjected to the heat of the kiln ; generally called "stained glass".

**STAIR.** In Scotland, a flight or series of steps.

**STAIRCASE.** A flight of stairs ; the space which contains the stairs.

**STAIRCASE HAND.** A term applied to the joiner whose work consists of making stairs.

**STAIRCASE RAKES.** Lincrusta walton or other wall hangings made or designed specially to suit the rake or pitch of stairs.

**STAIRCASING.** That branch of joinery which consists of constructing and putting in the staircases of a building.

**STAIR ROD.** A metallic rod for holding a stair carpet.

**STAIRS.** A flight or series of steps for ascending or descending from one floor to another ; made of wood, stone, iron and concrete.

**STAIRWAY.** The space which contains the stairs ; the passage up ; the headway or headroom.

**STAITH.** A line of rails projecting over the river for the coaling vessels, etc.

**STAKE.** A palisade ; a small piece of wood sharpened at one end ; used for marking or pegging out ground.

**STALDER.** A wooden frame to set casks on.

**STALK.** An ornament in the Corinthian capital which is sometimes fluted and resembles the stalk of a plant ; from it springs the volutes and helices.

**STALK.** A tall chimney stack or shaft.

**STALL.** Choir seats or stalls in a church ; usually applied to the back seats which are generally separated from each other by large projecting elbows.

**STALL.** A stand or division of a stable; a stand in a market.

**STALL BOARD.** The framing below the sill of a shop front; sometimes applied to the "sub-sill" (which see).

**STALLS.** The three or more rows of seats, generally reserved, next the orchestra in a theatre.

**STAMP.** Ornament beaten in the surface of a sheet of metal.

**STAMPING MILL.** An engine for breaking or bruising ore.

**STANCELLING.** Scotch term for guard bars.

**STANCHION.** A prop or support; a cast-iron pillar when of a rectangular section.

**STANCHION.** The upright bar in a window or screen, or the upright iron bar between the mullions of a window, screen, etc.

**STAND.** An erection or raised platform for spectators, as a "grand stand".

**STANDARD.** The vertical iron bars in a window; also called "stanchions".

**STANDARD.** The end of a choir stall, usually higher than the pew ends, and generally carved into a bunch of foliage on the top; also sometimes applied to a pew end or seat end.

**STANDARD.** A general term for any vertical support, as a post, etc.

**STANDARD.** Applied to timber, generally means a St. Petersburg standard hundred, all timber being generally brought to this.

**STANDARD.** In Scotland, the upright post or jamb of a door frame; a quarter.

**STANDARDS.** The vertical poles of a scaffold.

**STANDARDS.** The principal vertical posts of an iron railing or fence.

**STANDARDS.** The vertical sides of a dresser to support the shelves; they are called "cut standards" when the edges are cut into curves.

**STANDARDS.** The timber standards adopted by merchants are: Christiania, which contains 103½ cubic feet; Drammen, 121½ cubic feet; St. Petersburg, 165 cubic feet; and the Quebec, 229½ cubic feet.

**STANDARDS.** Plants so trained as to have upright stems carrying bushy tops; a gas-light rising from a floor.

**STANDARD THICKNESS.** Also called "reduced standard," is brickwork one and a half bricks thick, or an equivalent quantity of brickwork of other thicknesses.

**STANDARD WIRE GAUGE.** A gauge for ascertaining the thickness of a wire; generally written B.W.G., signifying Birmingham wire gauge.

**STANDING.** Durability; not liable to deteriorate; not cut down.

**STANDING BUDDLE.** A method of washing sand, ore, etc.; it is thoroughly washed in sieves, and troughs of water and stirred with shovels, etc.

**STANDING STONES.** Rude unhewn stones standing singly or in groups in various parts of the world, formerly erected to commemorate some great event.

**STANDING WASTE.** An overflow pipe at the bottom of a cistern.

**STANG.** Formerly, a pole, rod or perch; a long bar.

**STANNARY.** A tin mine; tin works; relating to tin mines or tin works.

**STANNIC.** Pertaining to or produced from tin.

**STANNINE.** A brittle metal composed of tin, sulphur, copper, etc.

**STANNOUS.** Containing tin.

**STANZA.** An apartment or division in a building.

**STAPLE.** A small bent piece of iron or wire pointed at the ends; used for various purposes; called a "keeper" in Scotland.

**STAPLE OF LAND.** The particular nature and quality of land.

**STAR FORT.** A fort surrounded on the exterior with projecting angles.

**STARLINGS, STERLINGS or STILTS.** An assemblage of piles driven round the piers of a bridge to protect the stonework.

**STAR SHAKES.** In timber, clefts or cracks in the end of a tree or log caused by the action of the air in drying; the shakes generally radiate from the centre, hence the term.

**START.** To move out of place. See Upstart.

**STATANT.** In heraldry, standing still with all the feet on the ground.

**STATEMENT.** A periodical summary (either monthly or quarterly) of invoices rendered, and balance (if any) left over unpaid from a previous statement.

**STATE ROOM.** A magnificent room in a palace, etc.

**STATICS.** That branch of mechanics which treats of the theory of the strains that produce equilibrium.

**STATIC, STATICAL.** Pertaining to bodies at rest or in equilibrium.

**STATIONARY ENGINE.** A steam engine in a fixed position which draws a load on a railway by a rope; also applied to various forms of fixed steam engines.

**STATION POINT.** In perspective, the place where the spectator is supposed to stand when looking at the object represented.

**STATUARY.** A collection of statues; the art of carving statues; a sculptor or carver of statues.

**STATUED.** Furnished with statues.

**STATUESQUE.** In the style or manner of a statue.

**STATUETTE.** A small statue.

**STATUE POLE, PERCH or ROD.** Sixteen feet and a half.

**STAVE.** In Scotland to "caulk".

**STAVED WELL.** In staircasing, is so called from its being made up of vertical pieces called "staves".

**STAVES.** In staircasing, the vertical pieces used to form a well.

**STAVES or ROUNDS.** Small upright cylinders of wood in a hay rack, etc.

**STAVES.** In joinery, boards joined together laterally to form a hollow body, as a cylinder, etc.

**STAVING A JOINT.** The method of setting up the exposed surface of a metallic lead socket joint to expand the metal to make it fit tightly.

**STAY.** To prop or support; the prop or support itself.

**STAY BAR.** In tracery windows, a horizontal bar extending in one piece along the top of the mullions.

**STAY BAR.** An iron standard used for windows glazed with lead lights.

**ST. DOMINGO MAHOGANY.** A hard, heavy variety of a deep red colour; generally well veined or figured.

**STEAM.** The vapour of water, or the elastic gaseous fluid generated by heating water to the boiling point of 212°.

**STEAM BOILER.** A boiler in which water is converted into steam.

**STEAM CHEST.** A chest connected with a steam pipe, for heating glue, etc.

**STEAM ENGINE.** An engine worked by steam.

**STEAM GAUGE.** An apparatus attached to a boiler to indicate the pressure of the steam.

**STEAM HAMMER.** A forge hammer worked by steam.

**STEAM HOSE.** A flexible form of steam pipe used to carry steam to portable pumps, such as the pulso-meter for draining foundations.

**STEAM JOINERY.** Works in which joinery is made principally by machinery.

**STEAM MASON.** The term applied to the lathe in which large granite columns, etc., are turned; also applied to a machine for dressing and moulding stone.

**STEAM PIPE.** The pipe communicating with the upper part of the boiler, through which the steam passes on its way to the cylinder.

**STEATITE.** A compound of magnesia and silica. Same as Soapstone.

**STEEL.** Iron containing from a half to one and a half per cent. of carbon, the alloy having the property of taking a temper.

**STEEL NAILS.** Are finer, cleaner, but more expensive than ordinary nails; made from molten metal pressed into moulds; used in high-class joinery.

**STEELYARD.** A lever balance with arms of unequal length for ascertaining weights; formerly called the "statera Romana," or "Roman balance".

**STEEPER.** A large vat or cistern for steeping things in.

**STEEPLE.** A turret or spire of a church tapering to a point.

**STEEPLED.** Having or adorned with steeples ; like a steeple.

**STEINING, STEENING.** The lining of a well with brickwork ; stone is seldom used.

**STELA.** A small column without base or capital

**STELCH.** A strip of thatch laid up (not along) the roof.

**STEOGRAPHY.** The art of inscribing characters on pillars.

**STEMPLE.** A cross bar of wood in a mine shaft.

**STENCH TRAP.** A trap for the prevention of the escape of effluvia from sinks and drains.

**STENCIL.** A piece of thin metal, or other substance, perforated with a pattern ; used in painting walls, etc.

**STENCILLING.** The method or process of using stencils.

**STEP.** That part of a stair upon which the foot is placed ; it consists of a tread and riser ; a succession of steps make a flight of steps or stairs.

**STEP.** A small perpendicular rise in a floor, or as part of a stair ; a round or rung of a ladder ; a pace ; the hole or socket which takes the butt of a mast or a flagstaff.

**STEP DOWN.** See Transformer.

**STEP IRON.** A small iron step built into a wall.

**STEP LADDER.** A stair having treads and strings but no risers, generally steeper or higher pitched than an ordinary stair.

**STEPPED FLASHING.** Flashing laid on the rake and cut into a series of steps, each step being cut back to keep out the rain, etc. ; used round chimneys, etc. ; the edges are turned into the joints of the brickwork.

**STEP UP.** See Transformer.

**STERCUS.** The Latin for dung, used with the same meaning as "soil".

**STERE.** The unit for solid measure, equal to a cubic metre.

**STEREOCHROMY.** A method of painting walls intended to supersede fresco.

**STEREOGRAPHIC PROJECTION.** That projection of the sphere wherein the eye is supposed to be placed on the surface.

**STEREOGRAPHY.** The delineation of solid bodies on a plane.

**STEREOMETER.** An instrument for determining the specific gravity of bodies.

**STEREOMETRY.** The art of measuring solid bodies and finding their solid contents ; the art of determining the specific gravity of bodies.

**STEREOTOMY.** The science or art of cutting solids into figures or sections.

**STETTIN OAK.** Is lighter in colour, straighter in grain, and not so well figured as the other varieties ; imported in square logs with very wavy corners. The Stettin oak trade is rapidly declining, the port being too far from the Russo-Polish forests ; the port of Dantzic, being much nearer, is rapidly acquiring the Stettin trade.

**STICK.** A small shoot or branch of a tree.

**STICKING.** Another term for running or working mouldings.

**STICK LAC.** Consists of twigs covered with lac gum.

**STICK SOLDER.** That sold or made in sticks.

**STIDDY.** An anvil ; a smith's shop.

**STIFF.** Rigid ; not easily bent.

**STIFF.** Said of a gas bracket or pendent having no joint.

**STIFFENER.** An angle or T iron fixed to a plate iron girder to stiffen it.

**STIFF MUD BRICK.** One moulded from clay in the condition of stiff mud.

**STIFFNESS or RIGIDITY.** The property or disinclination of some bodies to resist failure through buckling or twisting when loaded.

**STIGMA.** Sometimes applied to a branding iron.

**STILE.** Same as Style, or a set of steps or gate in a fence or hedge.

**STILL ROOM.** A room in a mansion, etc., for the preparation of preserves, etc.

**STILOBATUM** or **STYLOBATE**. The body of a pedestal.

**STILTED ARCH**. An arch having the capital, springer or impost moulding of the jamb below the springing.

**STIRRUP IRON**. An iron strap used to suspend tie beams to the feet of king or queen posts in roof trusses.

**STINK TRAP**. Same as Stench Trap.

**STITHY**. Same as Stiddy.

**STOCK**. A brace for holding bits in boring; the frame for holding the dies in screw cutting; generally known as "stock and die" or "stocks and dies".

**STOCKADE**. In fortifications, a line of posts or stakes set as a fence or barrier.

**STOCK BRICKS** or **STOCKS**. Are fairly sound, hard burned bricks; generally used for building.

**STOCK EXCHANGE**. The building in which stocks are bought and sold, *i.e.*, stocks and shares.

**STOCK LOCKS**. Are generally enclosed in an oak casing, sometimes iron bound, frequently ornamented, of different kinds and qualities; generally used for inferior work.

**STOKE GROUND**. A stone of a light brown colour, soft, easy to work; when seasoned adapted for external work and carving.

**STOKE HOLE**. The mouth of a furnace.

**STONE**. Of glass equals five pounds.

**STONE**. The weight of fourteen pounds.

**STONE** or **GREY LIME**. Is of a light buff colour, slightly hydraulic and slakes freely.

**STONE AGE**. The period of stone implements prior to the use of bronze.

**STONE-CUTTER**. The operator who takes the cube stone or rough blocks as received from the quarry and hews, splits or cuts it into suitable sizes for the mason; also applied to a letter cutter in stone, as on tombstones, etc.

**STONE-CUTTING**. The act or business of hewing stones.

**STONE DRESSER**. One who smoothes and shapes stones for building; a banker mason.

**STONE HAMMER**. A hammer for breaking stones.

**STONE MASON**. A mason or one who works in stone; generally termed a mason.

**STONE MASON'S CEMENT**. Consists of clean river sand twenty parts, litharge two parts, quicklime one part, and enough linseed oil to form a thin paste; used for mending broken pieces of stone.

**STONE OCHRE**. A pigment found in the Cotswold Hills, in the form of balls imbedded in the stone; varies in colour from yellow to brown.

**STONE PIT**. A pit or quarry where stones are dug.

**STONE PITCH**. Hard inspissated pitch.

**STONE SLATES** or **TILE STONES**. Thin slabs of stone which splits into thin layers along the planes of bedding similar to slate; formerly used for roof coverings.

**STONE WALL**. A wall built of stones.

**STONEWARE**. The term applied to articles made from the plastic clays of the lias formation, mixed with sand and ground pottery to prevent shrinkage; burnt and glazed.

**STONework**. Work consisting of stone.

**STOOL**. Called "reprisal" in Scotland. A small portion of the mullion or jamb of a window or other opening worked on the sill.

**STOOL VALVE**. A valve in a water-closet apparatus closed by a disc and a weighted lever; it is opened by pulling the handle, thereby raising the lever.

**STOOTHINGS**. A term applied to the battening of walls.

**STOP**. To "stop" in painting is to fill up nail holes, etc., with putty before painting.

**STOP**. To "stop" in glazing is to fix a pane of glass with putty.

**STOP**. A bead for securing glass, or a sash, etc.

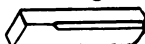
**STOP**. A button or block to prevent a door opening too far.

**STOP.** The termination of a moulding when stopped a short distance from the angle.

**STOP ACTION.** An apparatus for holding the cords of a Venetian blind to supersede the use of hooks.

**STOP BUTT HINGES.** Those that permit the closure to open only at or to a right angle, or a little more without breaking the hinges.

**STOP CHAMFER.** A chamfer finished or "stopped" a short distance from the angle (as formed by a rail, etc.), thus leaving a short length of the square material:



**STOP COCK.** A cock or tap for turning off the supply; or one prepared at both ends for jointing to a pipe.

**STOPPED.** Said of joints filled up flush with mortar.

**STOPPED.** Mouldings, etc., are said to be "stopped" when they do not run through to the end; applies to either wood or stone.

**STOPPED.** In glazing, putty filled in to a triangular section to keep the glass secure.

**STOPPING.** The act or method of filling up holes, etc., in woodwork with putty before painting.

**STOPPING KNIFE.** A knife used by painters in "stopping".

**STOPS.** A term applied to the beads for fixing the glass in a door, sash, etc.; also to the beads for securing or stopping the action of anything, as a door, sash, etc.

**STOP STONE.** The stone fixed in the ground for stopping a gate.

**STORM DOOR.** A term sometimes applied to the outer door of a building.

**STORM WATER.** Rain-water from roads, etc.

**STORM WINDOW.** A vertical recessed window in a sloping roof.

**STORY or STOREY.** The floor of a building; a house or building is said to be three, four or more storeys high, *i.e.*, according to the number of floors it has.

**STORY or HEIGHT ROD.** In stair-casing, a rod on which the height of the storey where the stairs are

to be placed is marked with exactness, and afterwards divided into the number of risers required; used for setting out the stairs.

**STORY POSTS.** Vertical timbers disposed in the storey of a building for supporting the superincumbent part of the exterior wall by means of a beam over them.

**STOUP.** In Scotland, a measure for liquids.

**STOUP.** A basin for holding the holy water, let into the wall of a church near the entrance.

**STOURBRIDGE FIREBRICKS.** Those made from a black clay found in a thick seam under the coal measures; generally of a pale brownish colour, and sometimes of a reddish or yellowish-grey.

**STOVE.** A general term for any apparatus enclosing a fire for heating or cooking.

**STOVE SCREWS.** Small screws having their heads either square, cup-shaped or circular, and flat points; used for securing the different parts of stoves, grates, etc.

**STRAIGHT.** Any work not curved, or deviating from a straight line.

**STRAIGHT ARCH.** One with a flat soffit.

**STRAIGHT BATTER.** A wall inclined at a uniform angle to the vertical.

**STRAIGHT EDGE.** A small board or piece of metal having one edge perfectly straight; used for various purposes.

**STRAIGHTENING.** In Scotland, the second coat of plastering.

**STRAIGHT JOINT.** In masonry, two or more joints falling together in the same straight line.

**STRAIGHT JOINT FLOOR.** That in which the joints between the boards are running in an unbroken line from wall to wall, each board laid and nailed in succession by means of a floor cramp or "floor dog".

**STRAIGHT LOCK.** That which can be fixed without cutting the wood-work.

**STRAIGHT STAIR.** That in which all the treads are parallel to each

other and rise in the same direction ; it should not consist of more than twelve steps with a landing if possible.

**STRAIN.** The alteration of form caused by the "stress".

**STRAINING BEAM.** The horizontal beam between the heads of the queen posts.

**STRAINING PIECE OR STRUTTING PIECE.** A timber placed between two opposite timbers to prevent them approaching each other.

**STRAINING PILLARS OF STANDARDS.** Iron standards used in wire fencing for straining or tightening up the wires.

**STRAINING SILL.** A piece of scantling lying on the tie beam and cut in tight between the feet of the queen posts.

**STRAKE.** The iron band of a wheel.

**STRAND.** One of the parts or twists of which a rope is composed.

**STRAP.** An iron plate for connecting two or more timbers.

**STRAP.** (Scotch term.) A rough wood fillet for "battening".

**STRAP BOLTS.** Wrought iron straps with screw bolt ends passing through one of the timbers to be secured together ; tightened up by screwing up the nuts.

**STRAP HINGES.** Are in the form of a long flat bar of iron or strap with a hook at the end ; used for hanging heavy doors. They are used for ornamental as well as for hingeing purposes ; chiefly used for church doors, gates, etc.

**STRAP SOLDER.** That made by running molten solder on to a clean level stone into lengths or "straps" about a foot long and half an inch wide.

**STRAPPED OR BATTENED WALLS.** Consist of wood battens fixed on a wall vertically at intervals to receive the laths for plaster.

**STRASBURY TURPENTINE.** That produced from the silver fir (*Pinus picea pictinata*) ; it should be clear, free from impurities, strong resinous smell, transparent, bitter taste and of the consistence of syrup.

**STRASS.** A variety of flint glass.

**STRATA.** Layers of mineral substances, as rocks, etc., naturally deposited in the earth.

**STRATIFIED.** Ranged in strata or layers.

**STRATIGRAPHY.** The science of the geological arrangement of strata.

**STRATUM.** A bed or layer of rock, sand, coal, etc. ; a bed or layer artificially made ; the plural is strata.

**STREAM TIN.** Tin ore found in alluvial soils, carried there by the action of water.

**STREET.** A paved road lined with and including houses.

**STREET DOOR.** That opening into the street.

**STRENGTH.** The resistance which a body opposes to a permanent separation of its parts.

**STRENGTH.** To resist crushing, is the resistance offered by material to a compressive stress, thrust or pressure.

**STRENGTH.** To resist bearing, is the resistance offered by material to being indented or partially crushed by another body pressing upon it.

**STRESS.** The term applied to the forces producing alteration of form in materials.

**STRESSES.** The various stresses that can come upon any member of a structure are :—

Transverse, producing cross strain or bending ;

Shearing, producing cutting ;

Tension, producing stretching or pulling ;

Torsion, producing twisting or wrenching ;

Compression, producing crushing or pushing.

**STRETCHER.** A stone or brick whose greatest dimension lies parallel to the face of the wall ; called "out band" (in masonry) in Scotland.

**STRETCHER OR STRETCHING BOND.** Consists of all the bricks being laid as "stretchers" ; sometimes called "chimney bond".

**STRETCHING COURSE.** A course or row of stretchers.

**STRETCH OUT.** Same as Development, which see.

**STRIÆ, STRIA or STRIGÆ.** Terms applied both to the fillets and to the flutes of columns.

**STRIATE, STRIATED.** Marked with striæ or with small channels; chamfered or channelled.

**STRIATING.** A term sometimes applied to flutings.

**STRIATURE.** Disposition of striæ.

**STRIKE.** To remove a center.

**STRIKED BUSHEL.** Applied to cement, a measure containing 1.28 cubic feet, lightly filled and struck smooth at the top with a straight edge.

**STRIKING.** Of a center, the removal of the timber framing (the center), upon which an arch is built, after its completion.

**STRIKING.** A term used to denote the draft of lines on the surface of a body.

**STRIKING OUT.** In joinery, the operation of marking the material to the required sizes, etc.

**STRIKING PLATE.** The plate fixed on the jamb or lining of a door frame to receive the blow and also the bolt of the lock.

**STRING.** The side of a stair which supports the ends of the treads.

**STRING.** In lead glazing, the narrowest lead used usually only for the repair of breakages or where the lead is not required to be seen from below.

**STRING BOARD.** Same as a string.

**STRING COURSE.** A narrow horizontal and slightly projecting course of brickwork or masonry on the face of an external wall; a horizontal band or line of mouldings.

**STRING COURSE.** In arches, a course of voussoirs extending from one end of the arch to the other.

**STRING PIECE.** A piece of timber in bridges.

**STRINGER.** In Scotland, a string.

**STRINGERS or STRING PIECES.** Vertical planks used in excavating; they are firmly nailed to the settings, and the upper ends nailed to baulks of timber lying across the excavation overhead; only used when the timbering has a tendency to slip.

**STRINGS.** In staircasing, the two sides of a stair running parallel to each other and into which the ends of the treads and risers are housed or grooved.

**STRINGY BARK.** A tree of the species of the eucalypti; used for wood paving.

**STRIP AND LATH.** The name given to "stuff" from two to four and a half inches wide and a half to one and a half thick or smaller.

**STRIPED or STROKED.** Stone with the tooled marks running diagonally across the face of the stone.

**STRIPPING.** Removing old paper from a wall.

**STRIX.** A channel or flute in a fluted column.

**STROCAL.** An instrument used by glass makers to empty the metal from one pot to another.

**STROKE.** The distance which a piston rod moves in one direction.

**STROKED or STRIPED WORK.** Is similar to tooled or boasted work except that the chisel marks run at an angle of about 45° instead of parallel to the edges of the stone.

**STROP.** In hoisting gear, a piece of rope spliced into a circular wreath and put round a block for hanging it by; also applied to the iron band surrounding the block.

**STRUCK.** A term used to denote the removal of any temporary support in a building during its erection.

**STRUCK JOINTS.** Those formed by pressing back the upper or lower portion of the joint whilst the mortar is moist.

**STRUCK OUT.** A term used by joiners signifying a piece of work "struck out" or drawn upon a board; also applied when the material has been marked to the required sizes or requirements, as mortises, tenons, mouldings, etc.

**STRUCTURE.** A building of any kind, but especially one of some size or magnificence; an edifice.

**STRUT.** Any short piece of wood or iron in compression, either vertical or oblique.

**STRUT.** The inclined timbers that branch out from a king post.

**STRUT.** Any timber supporting or keeping others from approaching.

**STRUTTING BEAM or STRUT BEAM.**

A term applied to a straining or collar beam strutting or straining pieces. See Bridgings.

**STUB or NIB.** The projection on a tile by which it is hooked on to the laths.

**STUBBLE.** The lower and stiffer half of wheaten straw.

**STUB NAIL.** A short, thick nail.

**STUB TENON.** A short tenon, nearly square in section, on the top of a post or at the foot of a door jamb.

**STUCCO.** In Scotland, plaster of Paris.

**STUCCO.** A fine plaster of any kind; used for walls or internal decorations; work made of stucco.

**STUCCO.** Plastering or cement work, either internally or externally, that is prepared to receive paint.

**STUCCOED.** Overlaid with stucco.

**STUCK.** In joinery, said of a moulding after it has been worked or run; a moulding is also said to be "stuck" when worked on the solid.

**STUDIO.** The workshop of an artist.

**STUDS, UPRIGHTS, QUARTERS.** The vertical pieces of timber in a partition; a set screw.

**STUFF.** The term applied to any cut timber, or wood intended for carpentry and joinery.

**STUFFED SOLID.** In upholstering, when no springs are used, cotton flocks being used for the stuffing; suitable for bar seating in public houses, etc.

**STUFFING BOX.** A box or compartment containing a packing through which the piston works in the top of a cylinder to render the cylinder steam-tight.

**STUGGED.** In Scotland, stone roughly dressed with a pointed chisel.

**STULM.** A shaft to draw water out of a mine.

**STUMP MORTISE.** A mortise that does not go entirely through the stuff; that for the reception of a "stump tenon".

**STUMP TENON.** A short tenon

that does not go entirely through the piece of stuff at right angles to it.

**STUMP TRACERY.** The term applied by Professor Willis to the tracery in the later or after Gothic of Germany, in which the ribs are made to pass through each other and abruptly cut off.

**STYAGALMAIC.** Applied to figures serving as columns; a figure serving as a column.

**STYENITE or SYENITE.** A genus of rock similar to granite, only tougher, harder, more compact, finer grain and darker in colour than ordinary granite; generally used for paving and road materials, takes a fine polish and is suitable for exterior ornamental work, only expensive; generally dark green in colour; found in Leicestershire, Merionethshire and the Channel Islands.

**STYLE.** The vertical side of a door, sash, etc., containing the mortises, and into which the rails are tenoned.

**STYLE.** An order or disposition of architecture, of which there are numerous styles.

**STYLOBATE.** A pedestal, consisting of a base, a dado or die, and a simple cornice; that part of a structure on which an order is raised, and on which the columns immediately stand.

**STYLOBATION.** The pedestal of a column.

**STYLOGRAPHY.** A method of tracing lines by means of a style or pointed instrument.

**SUBAPENNINE.** Applied to a series of tertiary strata of the older pliocene period.

**SUB-BASEMENT.** A storey excavated under the "basement".

**SUBCONTRACT.** A contract under a previous or existing contract.

**SUBCONTRACTOR.** One who works under a subcontract.

**SUB-MAIN.** In agricultural drainage, drains which, though receiving the discharge of other drains, are yet themselves subsidiary to another and larger "main" drain.

**SUBNORMAL.** The distance between the foot of the ordinate and

a perpendicular to the curve (or its tangent) upon the axis.

**SUB-PLINTH.** A second and lower plinth placed under the principal one in columns and pedestals.

**SUB-PRINCIPALS.** Auxiliary or principal braces.

**SUBSELLIUM.** A shelving seat in a stall ; a miserere.

**SUB-SILL.** The sill under the bottom rail or sill of a shop front.

**SUB-SOIL.** The bed or stratum of earth which lies immediately beneath the surface soil.

**SUB-SOIL DRAINS.** Drains laid with open joints for the purpose of carrying away the water saturating the ground and not directly connected with the surface or any sewage system.

**SUBSTRATUM.** A layer of earth lying under another.

**SUBSTRUCTION.** An under building.

**SUBSTRUCTURE.** A foundation ; an under structure.

**SUBSULPHATE.** A sulphate with an excess of the base.

**SUBTANGENT.** The line which determines the intersection of the tangent in the axis prolonged.

**SUBTENCE.** The chord of an arch.

**SUBTERRANE.** A cave or room under ground.

**SUBURB or SUBURBS.** The district on the outskirts of a town.

**SUBWAY.** An arched passage underneath a street.

**SUCCIFEROUS.** Producing or conveying sap.

**SUCCULA.** An axis or cylinder with staves in it to move round, but without a drum.

**SUCKER.** The piston of a pump.

**SUCTION.** The act of sucking or drawing a liquid into a pipe.

**SUCTION HOSE.** A flexible form of pipe used to convey the water from the foundations to the pump.

**SUCTION PIPE.** The lower pipe of a pump.

**SUCTION PUMP.** One in which a vacuum is produced and the water forced up by atmospheric pressure.

**SUDATORY.** A hothouse.

**SUGAR OF LEAD.** The commercial term for acetate of lead.

**SULPHATE.** A salt of sulphuric acid.

**SULPHATE OF COPPER.** A compound of sulphuric acid and copper.

**SULPHATE OF IRON.** A compound of sulphuric acid and iron.

**SULPHATE OF LIME.** A compound of sulphuric acid and lime.

**SULPHATE OF ZINC.** A compound of sulphuric acid and zinc.

**SULPHIDE.** A combination of sulphur with a metal or other substance.

**SULPHUR.** A mineral substance of a yellow colour, brittle, insoluble in water, but fusible by heat ; brimstone.

**SULPHURATE.** To combine with sulphur.

**SULPHURET.** A sulphide.

**SULPHURIC ACID.** Oil of vitriol.

**SUMMER.** Formerly, a large, heavy wooden beam ; a horizontal beam or girder.

**SUMMER HOUSE.** A small structure in a garden ; used as a shelter.

**SUMMERING.** The bedding of stone used in the construction of a vault. Also see Beds of Stone.

**SUMMER LEVEL.** The highest level of a canal, road, etc., in surmounting an ascent.

**SUMMER STONE.** A skew corbel.

**SUMMER TREE.** A horizontal beam supporting a weight. Same as Lintel, Girder, etc.

**SUMP or SUMP.** A pit for collecting water ; a pit lined with clay for receiving metal in fusion.

**SUN BURNER.** A kind of large gas burner for lighting and ventilating public buildings.

**SUN-DRIED CLAY.** The condition of bricks upon removal from the "hacks," where the clay merely loses some of its moisture.

**SUNDSVALL WHITE DEALS.** Are hard and stringy, and are only used for rough work.

**SUNK.** Implies cutting below the surface, as in weatherings, panels, etc.

**SUNK DRAFT.** A margin cut below the face of a stone.

**SUNK MOULDINGS.** Same as Drop Mouldings.

**SUNK PANEL.** A panel cut below the surface of the material.

**SUNK SHELVES.** Those formed with a groove or sinking in them to prevent the plates, dishes, etc., from sliding off.

**SUNK WORK.** Consists of stone or wood worked below the surface, as rebates, weatherings, sinkings, etc., may be either straight or curved.

**SUNN.** A material similar to hemp; used for canvas, etc.

**SUN SHAKES, SURFACE SHAKES.** In timber, are clefts, cracks or splits, which form after the tree has been felled; due to shrinkage in seasoning.

**SUPER.** Superficial.

**SURCHARGE.** In heraldry, to place one bearing on another.

**SUPERCILIUM.** Small fillets above and below the scotia of the Ionic base; a lintel returning at the ends (and with similar mouldings) down upon the "antepagmenta".

**SUPERCOLUMNIATION.** The placing of one tier of columns upon another.

**SUPERFICIAL.** Pertaining to the surface; area.

**SUPERFICIES.** The surface or exterior.

**SUPERINCUMBENT.** Lying or resting on something else.

**SUPERIOR COLOURS.** Colours other than common colours (which see).

**SUPERSTRATUM.** A stratum or layer above another.

**SUPERSTRUCT.** To build; to erect.

**SUPERSTRUCTION.** A superstructure.

**SUPERSTRUCTURE.** The work built on the foundation of a building; the upper part; the part above ground.

**SUPPORTERS.** In heraldry, figures of beasts that appear to support the arms.

**SUPRACRETACEOUS.** Applied to rocks which lie above the chalk.

**SURBASE.** Of a dado, the horizontal mouldings, cornice or capping on the top.

**SURBASE.** A chair rail; a dado rail; the upper mouldings or cornice of a pedestal, podium, etc.; moulding above the base.

**SURBASED.** Having a surbase or moulding above the base.

**SURBASED.** Said of a vault or arch when the rise is less than half the span.

**SURBASED OR DIMINISHED DOME.** That segmental on its vertical section.

**SURBASED ARCH.** One that rises less than half the breadth of the opening above the springing line.

**SURBASEMENT.** That part of any arch or vault that describes a portion of an ellipse.

**SURBED.** To place a stone in a different position to that which it occupied in the quarry.

**SURCHARGE.** To overload; the load itself; the earth above a "surcharged wall".

**SURCHARGED WALLS.** Those when the earth slopes up and back from the top of the wall, the earth above being called the "surcharge".

**SURFACE.** The plane exterior part of anything.

**SURFACE BOX.** A cover for a valve on an underground pipe.

**SURFACE WATER.** The rain-water that runs off the surface of the ground.

**SURMOUNTED.** In heraldry, a term used when one figure is laid over another.

**SURMOUNTED ARCH, DOME or VAULT.** That which rises more than half the span of the base.

**SURVEY.** To measure land.

**SURVEYING.** The art, method or business of measuring land by applying the principles of geometry and trigonometry.

**SUSPENDING ROD.** Another term for a king or queen rod or bolt.

**SUSPENSION BRIDGE.** One supported by chains, etc., which pass over high piers, columns or towers at each end.

**SWAGE.** A tool used for making mouldings upon sheet iron.

**SWAGE.** To work or fashion a piece of iron by drawing it while hot into a groove or mould having the required shape.

**SWALLOW TAIL, SWALLOW TAILED.** Tapering towards the end. Same as Dovetailed.

**SWAMP ORE.** An ore of iron found in swamps.

**SWAN NECK.** In handrailing, a ramp and knee combined, *i.e.*, concave in one part and convex in the other.

**SWAN NECK.** An **S** shape bend in a pipe.

**SWAPE.** A pole supported by a fulcrum; used for raising water from a well.

**SWARF.** Iron filings used for making a rust joint.

**SWEAT.** Said of a pipe, etc., on which moisture forms on the outside.

**SWEDISH STANDARD DEAL.** Is fourteen feet by ten inches by three inches.

**SWEDISH IRON.** That produced from pure magnetic iron ore, smelted with charcoal; superior to any iron made in England as regards tenacity and toughness; the ore is chiefly obtained from Dannemora.

**SWEDISH TIMBER.** Is imported from Stockholm, Gottenburg, Gelfe, etc.; generally used for rough building work; straight in grain, small knots, clear of sap except the heart, which is often shaky and sappy.

**SWEEDLAND PAVING.** That made from a black slate dug in Leicestershire; useful for paving party-coloured paving.

**SWEEP.** In joinery, a curve, or a curved piece of wood, as the head of a door frame, etc.

**SWEEP.** A bundle of straw, hay or rag placed in a flue during its construction and drawn up as the work proceeds, so as to intercept any bricks or mortar which may fall down.

**SWEEPING ARM.** A short branch on a syphon for purposes of cleaning or inspection.

**SWEEPS, PAIR OF.** Large compasses for drawing circles.

**SWEEP WORK.** Another term for curved or circular work.

**SWEEP WORK.** Circular work.

**SWEET OR SPANISH CHESTNUT.** Closely resembles oak in appearance, only that it has no medullary rays; lighter than oak, and liable to split in nailing; used for inside work.

**SWELL.** A slight curve or convexity given to anything, as the shaft of a column, etc.

**S.W.G.** An abbreviation of Standard Wire Gauge, which see.

**SWINE STONE.** A variety of limestone.

**SWING BAR.** An iron bar hung on a pivot used for fastening gates, etc.

**SWING BRIDGE.** A bridge that may be opened by swinging.

**SWING GATE.** A gate working in a bow or semicircular railing.

**SWING DOOR.** That which can be opened either inwards or outwards.

**SWING DOOR HANDLE.** A handle for a swing door, consisting of an upright bar called the "grip" attached at top and bottom to the door.

**SWING SASH.** One hung on centres.

**SWITCH.** A contrivance for making or breaking the electric circuit.

**SWITCH DOUBLE POLE.** One which breaks both the + and - conductor; there are also three, four, five, etc., pole switches.

**SWIVEL.** A movable joint formed by a kind of ring and pivot; used in chains to prevent them twisting; a joint for a gas bracket.

**SWORD.** In the North, a brace, bearer, ledge, slat, etc.; a bearer for a school form.

**SYCAMORE** (*Acer pseudo platamus*). Is chiefly found in Great Britain, also in Germany; durable when dry, does not warp; compact, not hard and has no large medullary rays. The wood is white when young but becomes yellow with age; frequently brown near the heart; sometimes called "plane tree".

**SYNCHRONOUS MOTOR.** One that runs in step with the alternator supplying the mains.

**SYENITE.** A rock composed of quartz, hornblende and mica.

**SYENITIC GRANITE.** Consists of quartz, felspar, mica and hornblende, tougher and more compact than ordinary granite.

**SYNAGOGUE.** A Jewish church.

**SYPHON.** Consists of a  $\cap$  shaped tube.

**SYPHONAGE.** The action of a syphon.

**SYPHON CISTERN.** A water-closet cistern in which the quantity of water available for flushing the closet is not under the control of the user, *i.e.*, once the action is begun by pulling the handle, the water does not cease running till the cistern is emptied.

**SYPHONIC CLOSET.** A water-closet trap and basin so constructed that the contents are syphoned out by the action of the water flush instead of being washed out as in hopper basins.

**SYSTYLE.** The mode of placing columns where the space between the two shafts consists of two diameters.

# T.

**T.** As a numeral, denotes one hundred and sixty, and with a dash over it, one hundred and sixty thousand.

**T.** A general term for anything of a T section or shape, as a T square, T iron, T hinge, etc.

**T HINGE.** See Cross Garnet Hinge.

**T IRON.** Wrought iron in bars of T shaped section.

**T PIECE.** A junction piece for a pipe in which the two branches meet at right angles.

**TABBY.** A mixture of lime with shell, gravel and stones.

**TABERN.** A term formerly applied to a cellar.

**TABERNACLE.** Formerly a movable temple erected by the Israelites in the wilderness.

**TABERNACLE.** A seat or niche with an ornamental canopy or hood over it; frequently used in buttresses in Decorated architecture.

**TABERNACLE.** In the Roman Church, a chest placed on the altar as a receptacle for the consecrated elements in the Eucharist.

**TABERNACLE WORK.** Tracery work used to decorate the canopy of a tabernacle.

**TABERNACULAR.** Formed with delicate tracery; latticed.

**TABLATURE.** A painting on a wall or a ceiling; that part formed according to one design and comprehended in one view.

**TABLE.** In perspective, the same as the plane of the picture, being the paper or whatever material on which a perspective drawing is made.

**TABLE.** Of glass, a circular plate

of glass, being in its original form before it is cut or divided into squares.

**TABLE.** Of glass, is five feet; forty-five tables make a case, but of New-castle or Normandy glass, twenty-five tables make a case.

**TABLE.** A single sheet of crown glass.

**TABLE.** A smooth flat surface, or simple member or ornament, usually rectangular.

**TABLE or TABLET MOULDINGS.** In Gothic architecture, horizontal bands or mouldings, as cornices, bases, etc.

**TABLE.** Applied in T iron to the part a right angle is to the cross piece.

**TABLE or TABLED JOINT.** In carpentry, a joint in which one piece of timber is let into another by means of alternate projections from the middle.

**TABLE JOINT.** A joint in masonry in which a wide projection is left on one stone to fit a corresponding hollow in another.

**TABLING.** A term used in Scotland to denote the coping of the walls of very common houses.

**TABLING.** The letting or jointing of one piece of timber into another by means of alternate projections.

**TABLING.** A joint in masonry, consisting of a flat projection cut on the bed of one stone and a corresponding sinking in the bed of the one under or overlying.

**TABLINUM.** A Roman apartment in which records and statutes were kept.

**TABULAR.** Having the form of a flat surface; having the form of laminæ or plates.

**TABULAR SPAR.** A mineral consisting of silica and lime.

**TABULATUM.** A term applied by the ancients to floors, wainscoting, ceilings, balconies or other projecting parts.

**TACE.** In Scotland, a birdsmouth or "sally" in carpentry.

**TACK.** A small, short, light nail with generally a flat head; usually named according to the shape of their heads, as rose, clout, Flemish; generally wrought or cut, and are either blacked, blued or tinned.

**TACK.** A narrow strip of lead or copper inserted between the edges of two sheets of lead in forming a seam, roll, etc.

**TACKET.** In Scotland, a small nail with a large thick head; a tack.

**TACKLE.** Pulleys, ropes, etc., used for raising or lowering weights.

**TACKSMAN.** In Scotland, one who holds a tack or lease of land from another.

**TACKY.** Applied to paint or varnish when sticky or nearly dry.

**TÆNIA.** The band or fillet over the architrave in the Doric entablature.

**TAFT JOINT.** In plumbing, one formed by widening out the end of a lead pipe and inserting the end of another and soldered round the socket.

**TAGGERS.** A thin kind of tin plate.

**TAGLIA.** In mechanics, a particular combination of pulleys; the Italian term for pulley.

**TAIL.** Formerly used to denote the hold of any bearing piece on that which supported it, as the end of a joist, etc.

**TAIL.** That part of a bib-cock attached to the water-pipe; also called the "shank".

**TAIL.** Of a slate, the lower part or the bottom edge of a slate or tile.

**TAIL.** The end of a stone or of a hinge, etc., is said to "tail" into the wall into which it is built.

**TAIL BAYS.** An end bay; flooring joists framed with one of their ends let into a girder, and the opposite ends let into a wall; also applied to the space between a roof truss and the end wall of a building.

**TAILING.** The part of a projecting stone or brick inserted in a wall.

**TAILINGS.** The refuse from washing ore.

**TAILLOIR.** A French term applied to the abacus.

**TAIL PIPE.** In Scotland, a suction pipe.

**TAIL RACE OR TAIL WATER.** The stream of water which runs from a mill after it has served to turn the wheel.

**TAIL TRIMMER.** Same as Trimmer or Trimmer Joist.

**TAIN.** Thin tin plate; tinfoil for mirrors.

**TAKE UP.** A leak in an iron tank or pipe is said to "take up" when it stops of its own accord by the rusting of the iron.

**TAKING IN WASHING.** An architect preparing plans, etc., for another architect.

**TAKING OFF.** The method of measuring the several items and dimensions of a drawing, and the correct expression of them on paper.

**TALC.** A soft, whitish mineral found in talcose granite; consists chiefly of magnesia and silica.

**TALCOSE GRANITE.** Consists of crystals of quartz, felspar, mica and talc; the latter scales off in thin, flat, smooth flakes; does not weather well.

**TALLBOY.** A long length of zinc or sheet iron pipe used for the top of a chimney.

**TALON.** An ogee; the French term for an ogee.

**TALUS.** In fortifications, the slope of a work, as a bastion, rampart or parapet.

**TALUS.** A sloping heap of broken rocks and stones at the foot of a cliff.

**TALUS.** A slope or inclination of any work, as a wall with a batter on one face.

**TAMARACK.** The American larch.

**TAMBAC.** An alloy of copper and zinc.

**TAMBOUR.** In fortifications, a work formed of palisades.

**TAMBOUR.** The vase or naked ground of the Corinthian and Composite capitals.

**TAMBOUR.** The wall of a circular temple surrounded with columns; also applied to the circular vertical part below or above a cupola or dome.

**TAMBOUR.** A round course of stones, several of which form the shaft of a pillar, not so high as a diameter.

**TAMP.** To fill up a hole (bored in a rock for blasting), above the charge, with sand or other material, when it is said to be "tamped".

**TAMPING.** The method, material, or the act of filling up a hole bored in a rock for blasting.

**TAMPING BAR.** A bar used for ramming down the "tamping" in blasting; also called a "tamping iron".

**TANG.** The tapering part of a chisel, file, etc., which goes into the handle.

**TANGENT.** A straight line which touches but does not cut the circumference or any arc of a circle.

**TANGENT OF AN ARC.** A straight line drawn touching one extremity of the arc and limited by a secant drawn through the centre and the other extremity.

**TAN HOUSE.** A building in which tanner's bark is stored.

**TANIST.** In Ireland, the lord or proprietor of a tract of land.

**TANK.** A cistern; a reservoir of water.

**TANK EFFLUENT.** The top water in the precipitation tanks of a sewage works.

**TANNERY.** A house or building for tanning.

**TAN SPUD.** An instrument for peeling the bark from oak and other trees.

**TAN STOVE.** A hothouse with a bark bed.

**TANTALUM.** A metal now called columbium.

**TAP.** A water-cock for drawing

or shutting off water; applied to a cock of any sort. Same as Bib Cock.

**TAP.** A contrivance for cutting a female thread.

**TAP.** A subordinate bar in a hotel or public-house.

**TAPE OR TAPE LINE.** A tape marked with inches, etc., for measuring.

**TAPER OR TAPERING.** A gradual diminution in the size of a body.

**TAPESTRY OR ARRAS.** A kind of woven hangings of wool and silk; frequently enriched with gold and silver; used as wall hangings in the early times.

**TAPER PIPES.** Those made to form a connection between two pipes of a different diameter.

**TAPIS.** The French term for tapestry.

**TAPPED.** Said of a hole having had a female thread worked inside it.

**TAPPETS.** The small levers connected with the valves of the cylinder of a steam engine.

**TAPPING.** The operation of cutting a female thread.

**TAP ROOM.** A room in a beer house (*i.e.*, a public house with only a beer license) for drinking in.

**TAR.** A thick viscid substance obtained by destructive distillation from coal, wood, bituminous shales, etc.

**TAR CONCRETE.** That composed of broken stones and tar.

**TAR PAINT.** That having tar for its basis; sometimes having turpentine, naphtha, slaked lime and boiled oil added to it.


**TARE.** An allowance or abatement from the gross weight of goods in consideration of the weight of the package which contains them.

**TARIFF.** A glass manufacturer's price list; a list or table of duties or customs to be paid on goods imported or exported.

**TARPAULIN, TARPAULING.** A piece of canvas made waterproof by tar, etc.; used for covering goods, etc.

**TARRAS, TARRACE.** A volcanic earth resembling pozzuolana; used as a cement; useful in waterworks.

**TARSLA.** A kind of marquetry or mosaic woodwork made in Italy in the fifteenth century.

**TARUS or CURB ROLL.** A roll of this  section; formed in a mansard roof, etc., at the junction of the two pitches.

**TASIMETER.** An instrument for determining variation in temperature by variations of pressure.

**TASK WORK.** Same as Piece-work.

**TASSEL.** A pendent ornament formed of a bunch of cords or ribbons, etc., for adorning blinds, etc.

**TATIS.** Ancient term for ordonnance.

**TATTA.** A bamboo frame or trellis with water trickling down it; used in India for cooling the air as it enters a door or window.

**TAU CROSS or TRUNCATED CROSS.** That in the shape of the letter T; a St. Andrew's cross.

**TAVELLE.** Bricks seven inches long and three and a half broad; used by the ancients.

**TEAK** (*Sectona grandis*). A timber imported from India, Burmah, etc.; sometimes called Indian oak; when polished it can scarcely be distinguished from oak; it varies in colour from a brownish-yellow to a dark brown; fine straight grain, free from knots generally, very durable; imported in logs from twenty-three to forty feet long and from twelve inches square upwards; largely used for fitting up ships' cabins, etc., first-class stables, shop fittings, etc.

**TEAMING.** Formerly applied in excavating to the method of leading the earth from a cutting.

**TEASE TENON.** A tenon on the top of a post with a double shoulder and tenon from each, for supporting two level pieces of timber at right angles to each other.

**TEAZER.** A stoker or fireman.

**TEAZE HOLE.** The opening in a furnace through which the fire is fed.

**TECHNIC.** Technical art or skill.

**TECHNICAL.** Pertaining or belonging to a particular art or profession.

**TECTONIC.** Pertaining to building.

**TECTORIUM OPUS.** A species of plaster used by the ancients.

**TEE IRON or STEEL.** A bar of iron or steel rolled to T section.

**TEENAGE.** Fence wood.

**TEE PIECE.** A junction pipe in the form of the letter T.

**TEGULA.** A roofing tile.

**TELAMONES.** Same as Atlantes or Persians.

**TELEPHONE.** An apparatus for transmitting sound to a distance by means of electricity.

**TELMONES.** The places in a temple where the statues were placed.

**TEMPER.** That degree of hardness imparted to steel to enable it to take a cutting edge.

**TEMPERA.** Is a process of decoration in which the colour is mixed with gum to bind it.

**TEMPERED.** Steel is said to be "tempered" when it has had that degree of heat imparted to it to obtain the greatest hardness or "temper" of which it is susceptible.

**TEMPERED.** Applied to bricks that can be cut and reduced to a required form with ease.

**TEMPERED.** Applied to mortar and cement which has been well beaten and mixed together.

**TEMPERED.** Applied to clay which has been well beaten and mixed together.

**TEMPERING.** Of steel, consists of reheating and cooling at different temperatures.

**TEMPERING.** Of clay, mortar or cement, the method or act of beating and mixing.

**TEMPLA.** Timbers in the roof of Roman temples which rested on the cantherii, canterii or principal rafters; now called "purlins".

**TEMPLATE or TEMPLET.** Usually a wood or zinc pattern or mould; used by men in the building trade as a guide or pattern for the shape of their work.

**TEMPLATE or TEMPLET.** A short piece of wood or stone laid in a wall under the end of a girder or beam.

**TEMPLE.** An edifice erected for religious services.

**TEMPLE.** A building set apart for the services of religious worship. The following are the varieties of Greek or Roman temples :—

*Circular.*

**Monopteral.** An open circle of columns supporting a roof or entablature.

**Peripteral.** A circular cella surrounded by a colonnade.

*Oblong.*

**In Antis.** A plain cella, side walls projecting at one end finished with antæ, two columns between.

**Prostylos.** As last, but having a portico of four columns in front of the antæ, the two columns between the antæ being omitted.

**Amphi-prostylos.** A portico like the prostylos but at both ends of the cella.

**Peripteral.** A portico of six columns on each front, a detached colonnade of eleven on each side of the cella (Corner columns included in both computations.)

**Pseudo-peripteral.** As last, but the side columns engaged with the cella.

**Dipteral.** Porticoes of eight columns on the fronts, double colonnade at the sides, the outer side colonnade of fifteen columns. (Corner columns counted as before.)

**Pseudo-dipteral.** As last, but the inner range of columns omitted. Classification according to the number of columns in the front porticoes.

**Tetrastyle.** Having four columns.

**Hexastyle.** Having six columns.

**Octastyle.** Having eight columns.

**Decastyle.** Having ten columns.

**TEMPLED.** Enclosed in a temple.

**TEMPLET.** See Template.

**TEMPLUM.** The Latin for temple.

**TEMPORARY HARDNESS.** Water is said to be possessed of "temporary hardness" when it can be softened by boiling. Also see Permanent Hardness.

**TEMSE.** A sieve.

**TENACITY.** The resistance offered by material to tension or tensile stress ; cohesiveness ; adhesiveness.

**TENAILLE.** In fortifications, a work raised in the main ditch in front of the curtain, between two bastions.

**TENAILLON.** In fortifications, a work constructed on each side of the ravelins to increase their strength.

**TENEMENT.** A house ; a building for habitation.

**TENNANITE.** A blackish lead grey ore of copper found in Cornwall, combined with iron, arsenic and sulphur.

**TENON.** That projection along the grain at the end (and usually one-third the thickness) of a piece of wood, as a rail, etc. ; the part that fits into a mortise.

**TENON SAW.** A short saw with a brass or steel back to keep it from buckling ; used by joiners chiefly for cross cutting light work.


**TENPENNY NAILS.** Generally denotes nails about two and three-quarter inches long ; originally, a nail at tenpence the hundred.

**TENSILE STRESS.** That producing stretching or pulling.

**TENSION.** The effect of a direct pull, or the same result produced by other means.

**TENSITY.** The state of being stretched or strained to stiffness.

**TENSION BAR, TENSION PLATE, TENSION ROD.** Terms applied to the members of roof trusses and trussed beams ; an iron rod, bar or plate that resists a tensile stress.

**TENTER HOOK.** That of  shape ; used for fences, etc.

**TENTURE.** Paper hangings.

**TEOCALLI.** A four-sided pyramidal structure, built of earth and surmounted by a temple ; erected by the aborigines of Mexico.

**TEPIDARIUM.** A term applied to one of the apartments of a Roman bath.

**TEREBINE.** Consists of a powerful drier dissolved in spirits of turpentine ; used as a substitute for patent and other driers in the proportion of one ounce to one pound of paint.

**TEREDO NAVALIS.** A genus of worms which bore and destroy submerged wood, as piles, etc.

**TERM or TERMINUS.** A kind of trunk, pillar or pedestal, often in the form of a frustum of an inverted obelisk, with the bust of a man, woman or satyr placed on the top.

**TERMINAL.** A finial; finishings for smoke flues.

**TERMINALS.** The ends of the two (or more) wires of an electrical contrivance are generally brought to two (or more) metal pillars furnished with clamping screws; terminals indicate the beginning and the end of a particular circuit, as do terminal stations the beginning and end of a railway line.

**TERMINOLOGY.** The science of technical terms.

**TERMINUS.** The Roman god of boundaries, or a statued pillar representing him.

**TERMINUS.** The point or station where a railway or tramway terminates; a boundary; a boundary mark.

**TERNE PLATES.** Sheets of steel coated with an alloy of tin and lead varying from one-third to one-seventh of tin to two-thirds to six-sevenths of lead; sometimes used for a roof covering.

**TERRACE.** An area or raised level space or platform before a building to serve as a walk.

**TERRACE.** A balcony or open gallery; a street along the top of a terrace, or rising ground above the common level; the flat roof of a house; a raised level space of earth with sloping sides, usually covered with turf.

**TERRA-COTTA.** Baked or burnt earth, bricks, tiles, etc.; a cast made of a paste of fine clay and colourless sand, and burnt to a stony hardness; used for architectural decoration.

**TERRA SIENNA or RAW SIENNA.** Is produced from a clay stained with oxides of iron and manganese; of a dull yellow colour; durable in oil or water; useful in all work, especially in graining.

**TERRE BLUE.** A kind of earth used as a pigment.

**TERREPLEIN.** In fortifications, the top, platform or horizontal surface of a rampart.

**TERRE VERTE.** A natural coloured olive green earth used as a pigment.

**TERRIER OF THE SURVEY.** A term used by surveyors for a book of particulars of the land surveyed.

**TERRO METALLIC CLINKERS.** Small bricks (similar to Dutch clinkers) made from a clay which is burnt very hard to a dark brown or nearly black.

**TERTIARY FORMATION.** A series of strata more recent than the chalk.

**TESSELLATED.** Chequered; formed in small squares; mosaic work.

**TESSELLATED PAVEMENT.** Mosaic work, formed of small cubes of brick, stone or marble of various colours, laid on a ground of stucco or cement.

**TESSELLATION.** Mosaic work, or the operation of making or laying it.

**TESSERA.** Formerly applied to a composition for covering flat roofs.

**TESSERA** (plural *Tesseræ*). Small cubes of brick, stone, etc.; used in mosaic work.

**TESSULAR.** Relating to *tesseræ*; having equal axes like a cube.

**TEST.** A vessel in which metals are melted for trial and refinement.

**TESTACEOUS.** Pertaining or consisting of shells; made of burnt earth or of bricks or tiles.

**TESTER.** A flat canopy over a pulpit, tomb, etc. The covering carried by the tester is called the "seler" or "celura".

**TESTUDO.** Any arched roof; applied by the ancients to a light surbated vault, with which they ceiled the grand halls in baths, mansions, etc.

**TETRADON.** Formerly, a species of brick, four palms in length.

**TETRAGON.** A plane figure having four angles of 90°; a quadrangle.

**TETRAGONAL.** Having four angles.

**TETRAHEDRAL.** Bounded by four equal and equilateral triangles.

**TETRAHEDRON.** A solid figure comprehended under four equilateral and equal triangles.

**TETRAHEXAEDRON.** A solid bounded by twenty-four equal faces.

**TETRANTS.** The four equal parts of a circle when divided by the two diameters.

**TETRASPASTON.** A machine in which four pulleys act together.

**TETRASTYLE.** A building or portico with four columns in front.

**TEWEL or TEW IRON.** An iron pipe in a forge to receive the pipe of a bellows.

**TEWEL.** A pipe or funnel, as for smoke

**TEXT-BOOK.** One containing the leading points of a science or trade, arranged for the use of students.

**THERM, THERON.** Twisted gut.

**THATCH.** Straw or reeds used for covering the roofs of buildings.

**THATCHER.** One whose occupation is to thatch roofs.

**THATCHING.** The materials, act or method of covering with thatch.

**THEATRE.** A building for dramatic performances.

**THENARD'S BLUE.** Cobalt blue; so called from Thenard, a French chemist.

**THEODOLITE.** An instrument for measuring horizontal and vertical angles, or heights and distances in land surveying.

**THERMO-CURRENT.** An electric current developed by heat.

**THERMO-DYNAMICS.** The science of the relation between mechanical force and heat.

**THERMO-ELECTRIC.** Of the nature of thermo-electricity.

**THERMO-ELECTRICITY.** The electricity developed by heat.

**THERMO-ELECTROMETER.** An instrument for ascertaining the heating power of an electric current.

**THERMOMETER.** An instrument for measuring variations of temperature.

**THERMOPLASTIC PUTTY.** Ordinary putty mixed with tallow or some fatty, non-drying oil to enable the putty to retain its pliability; it gives and takes during the constant expansion and contraction of large panes of glass.

**THERMOSCOPE.** An instrument

for measuring minute differences of temperature.

**THERMOSTAT.** A self-acting apparatus for regulating temperature.


**THERMOTIC.** Relating to heat.

**THERMOTICS.** The science of heat.

**THESAURUS.** A Greek treasure house.

**THE THEORY OF VIRTUAL VELOCITIES.** The principle which determines the proportion between the power employed to move or resist and the weight which is sought to be moved or resisted.

**THILL.** The shaft of a wagon.

**THIMBLE.** An iron ring with a groove round its edge to receive a rope which is spliced to it: 

**THIMBLE.** A short length of iron pipe with a double socket; used for joining pipes.

**THINNINGS.** In painting, consists of oil and turps; used for thinning paint.

**THOLE.** The scutcheon or knot in the centre of a timber vault; also applied, in temples, to the place where the gifts were placed.

**THOLOBATE.** The substructure on which a dome rests.

**THOLOS.** The Greek term for a dome.

**THOLUS.** According to Vitruvius the roof of a circular building; also applied to all buildings of a circular form.

**THORINA.** A primitive earth with a metallic base; the oxide of thorium.

**THORITE.** A massive black mineral found in Norway.

**THORIUM.** The metallic base of thorina.

**THOROUGH BOND, THROUGH BOND.** A stone going right through the thickness of a wall.

**THOROUGHFARE.** A passage from one street or opening to another.

**THOROUGH FRAMING.** A term formerly used for the framing of doors and windows.

**THOROUGH LIGHTED ROOMS.** Those having windows on opposite sides.

**THOUSAND.** Marked M or m. Of nails or slates is 1,200; a thousand of slates is sometimes 1,260.

**THRAWN.** A Scotch term signifying warped.

**THREAD.** The spiral part of a screw.

**THREAD ESCUTCHEON.** See Escutcheon.

**THREAD SCREW.** In Scotland, that which secures the knob of a door to the spindle.

**THREE BRANCH HAND.** A plumber who combines the trades of plumbing, gasfitting and bellhanging. In some places the plumber is also a painter, glazier, grainer, paperhanger, hot-water fitter, coppersmith, tinsmith, etc.

**THREE COAT WORK.** In plastering, when three coats of plaster are applied.

**THREE-QUARTER BAT.** A brick with a quarter of its length cut off; sometimes used as a "closer".

**THREE-QUARTER HEADER.** A stone header extending three-fourths through the thickness of a stone wall.

**THREE WIRE AND FIVE WIRE SYSTEMS.** Special systems for the economical and convenient distribution of electricity; three or five wires instead of only two are used, and the generators are connected in a special manner. Two different voltages may be obtained from a three wire system, and four from a five wire.

**THRESHOLD.** The sill of a door frame, or the stone step.

**THROAT.** The widest part of a flue over the fireplace; a semicircular groove.

**THROATING.** A groove (sometimes a semicircular one) worked on the underside of a window sill, coping, etc., to form a check and prevent rain from running down the face of the wall.

**THROAT OF CHIMNEY.** The lower end of a flue where it begins to widen out for the fireplace.

**THRONE.** The seat of a bishop, raised above the level of the common floor and generally covered with a canopy; a royal seat raised above the level of the floor.

**THROTTLE VALVE.** A valve in steam engines for regulating the supply of steam to the cylinder.

**THROUGH CARVED OR PIERCED**

**WORK.** Consists of carved work in which spaces between the ornamental parts are pierced or cut entirely through the material.

**THROUGHS.** Applied to gas retorts with two mouthpieces.

**THROUGH STONE, BONDER, BOND-STONE OR PERPENT STONE, or THROUGH BOND or THOROUGH BOND.** A stone in a wall which reaches entirely through the thickness and shows itself on both sides.

**THROW.** In excavation, the distance, either horizontal or vertical, to which one man can conveniently shovel earth from where he stands.


**THROW OF A CRANK.** The following are definitions advanced by the standard dictionaries. Webster's definition of "throw" is: "The extreme movement of a slide valve; also of a crank or eccentric measured on a straight line passing through the 'centre of motion'". *The Standard Dictionary*: "The travel or extent of reciprocating motion obtainable, as from a crank, eccentric, or rock shaft". Knight's *Dictionary of Mechanics* says "throw" means "the radial reach of a crank, eccentric, or cam". *The Century Dictionary* and Forney's *Catechism of the Locomotive* incline to Webster's definition. According to the *Catechism*, the word "throw" is sometimes used to designate the distance from the centre of a shaft to the centre of a crank, pin or eccentric, which, of course, would be only one-half the extreme movement of a valve or piston.

**THRUST.** A push or pressure produced in the length of a beam; the force exerted by any body or system of bodies against another.

**THRUST.** The horizontal force or pressure of an arch against the abutments; the horizontal force exerted by an inclined strut.

**THUMBAT.** In Scotland, a wall hook used for fixing sheet lead.

**THUMB LATCH.** A common kind of latch for a door; called a "sneak" in Scotland.

**THUMB MOULDING.** A moulding of  section; used on the edges of tables, dresser tops, etc.

**THUMB PLANE.** Small hollows and rounds; used for moulding handrail wreaths and other circular work.

**THUMB SCREW.** A small cramp used by joiners; a screw with a large flat head to turn with the finger and thumb.

**THUNDER SHAKES.** Are irregular fractures across the grain of timber; occurring chiefly in Honduras mahogany.

**THUS.** The resin of the spruce fir.

**THWAITE.** A plot of ground cleared of wood and stumps.

**THYITE.** A species of indurated heavy clay; of a shining surface and pale green colour.

**THYMELE.** In Greek theatres, a kind of altar surrounded with steps placed in front of a stage.

**THYOREA.** The doors of a Greek temple or house.

**THYOREUM.** A passage in a Greek house.

**THYRSUS.** A staff entwined with ivy and vine leaves, carried at the festivals of Bacchus.

**TIDAL.** Periodically flowing and ebbing, as a river; pertaining to tides.

**TIDAL FLAP.** A flap over the outfall of a sewer, constructed to prevent water entering when the pipe is submerged by the rising tide.

**TIDE.** The alternate rising and falling of the waters of a river, etc.

**TIDE GATE.** A lock gate.

**TIDE MILL.** A mill worked by tide water.

**TIDE WATER.** The water affected by a tide.

**TIE.** A piece of timber or iron placed in any position and acting as a string or tie to keep two timbers from spreading, or to resist a force of extension; that member of a framing or roof truss that is in tension.

**TIE BEAM.** The beam in a roof truss which connects the bottom of a pair of principal rafters; formerly called "footing beam," "footing dormant," "roof beam," "chamber beam" and "binding beam".

**TIE JOIST.** In Scotland, a "tie beam".

**TIERCE.** In heraldry, a field divided into three parts.

**TIERCE POINT.** The vertex of an equilateral triangle.

**TIERING.** Plastering slates between each row or course of battens.

**TIE ROD.** The name given to a rod of iron; generally used in iron roofs; it answers the same purpose as a tie beam.

**TIES.** Tension rods.

**TIGE.** The shaft of a column from the astragal to the capital.

**TIGNA.** Formerly applied to a tie beam.

**TILE.** A slab of thin brick, of various shapes; used for roofs and also paving; a small, square, thin slab of pottery, generally glazed and ornamented with a design.

**TILE CREASING.** Plain tiles laid under the coping of a wall and slightly projecting on each side.

**TILED.** Covered with tiles.

**TILE DRAIN.** A drain constructed of tiles.

**TILE KILN.** A kiln for burning tiles.

**TILE LATHS.** Battens for supporting tiles on a roof.

**TILE ORE.** A variety of octahedral red copper ore.

**TILE PEG.** A short cast-iron nail too thick for slating; used for securing tiles to roofs.

**TILE PINS.** Oak pegs for fixing plain tiles.

**TILER.** One whose occupation is to fix tiles.

**TILERY.** A tile work.

**TILE WORK.** A place where tiles are made.

**TILGATE BEDS.** The series of strata in the weald of Kent and Sussex.

**TILING.** Work having tiles; the materials, act or method of using tiles.

**TILL.** A cash drawer in a shop; to cultivate land.

**TILLAGE, TILTH.** Land under cultivation.

**TILT.** To hammer or forge with a tilt hammer; an awning for a cart.

**TILTED STEEL.** Same as Shear Steel, which see.

**TILT HAMMER.** A heavy hammer used in iron-works; worked by machinery.

**TILTING.** The process by which blister steel is rendered ductile.

**TILTING FILLET.** A small triangular or feather-edged deal fillet, fixed all along the eaves of a roof to give the first course of slates a tilt or bell cast, and to ensure tight joints at the tail of the slates; called "doubling" in Scotland.

**TILES.** As a roof covering, have of late years given way to slate; tiles are of various shapes and colours, made of clay pressed into moulds and burnt in a kiln. Broseley tiles are considered the best.

**TILE STONES.** Flags or paving stones from thin bedded sandstones.

**TIMBER.** The term applied to all varieties of wood, which, when felled and seasoned, are suitable for building purposes. Trees are divided by botanists into three classes:—

*Ecogens*, or outward growers;

*Endogens*, or inward growers;

*Acrogens*, or summit growers.

**TIMBER.** A term usually applied to any large-sized stuff.

**TIMBER BUILT HOUSE OR HALF TIMBER HOUSE.** Usually that in which the ground floor is of stone or brick, the upper storeys being formed of wood framing, the interstices between the wood being filled up with brick or plaster work.

**TIMBERED.** Having timbers; covered with wood.

**TIMBER FISH PLATE.** See Plain Fished Joint.

**TIMBER FRAMED ROOFS.** Roofs constructed with trusses or principals.

**TIMBER IN SCANTLING.** That sawn up in scantling or quartering.

**TIMBER TRADE.** The trade in timber.

**TIMBER TREE.** A tree suitable for timber.

**TIMBER YARD.** A yard or place where timber is kept for sale or seasoning.

**TIMBRE.** A crest on a coat of arms.

**TIN.** Is chiefly found in Corn-

wall; sometimes in beds of rivers near the mines, but generally in veins running through rocks of granite, porphyry or clay slate; it is sometimes combined with the sulphides and arsenides of copper, iron and wolfram; also found in Borneo, Malacca and Mexico.

**TINCTURE.** In heraldry, a term applied to metals, colours and tints; used for the field of an emblazoned shield.

**TINFOIL.** Tin reduced to a thin leaf.

**TINGLES OR BALE TACK.** Small clips of zinc or copper used to keep glass from slipping when fixed on a slope, as a greenhouse roof.

**TINGLES.** The bricks used by a bricklayer for propping up his line to prevent it sagging.

**TINNED.** Said of brass or iron when covered with a thin coat of solder or tin, for making a soldered joint.

**TINNED.** Covered with tin.

**TINNED COPPER.** Sheet copper coated with tin.

**TINNING.** The art or method of covering or lining anything with melted tin or with tinfoil.

**TIN PAN.** In plumbing, a small tin plate about four inches square.

**TIN PLATE.** Sheet iron covered with a coating of tin by a process similar to that of galvanising, tin instead of zinc being used. There are two varieties of tin plate, "charcoal plate" and "coke plate," so termed from the plate iron being made with charcoal and coke respectively.

**TIN SMITH.** A worker in tin.

**TIN STONE.** A native oxide of tin found in Cornwall.

**TINT.** A slight shade of colour.

**TINT.** Applied to a hue or colour to which white has been added, any number of "tints" being obtained according to the amount of white used. Also see Hue and Shade.

**TINTINNABULARY.** Relating to bells.

**TIN WHITE.** Consists of sulphate of tin.

**TIPPET.** In thatching, a handful of straw bound together at one end.

**TIPTON BLUE BRICKS.** Are bricks named after the town near which they are made.

**TIRE.** A band or hoop of iron round a cart wheel.

**TITANIC PAINT.** That prepared by powdering a black ore which contains oxide of iron and oxide of titanium in nearly equal proportions mixed with other ores. Titanic paint is well adapted for withstanding heat, and will harden without driers.

**TITANIUM.** A metal of a deep blue colour often found in small cubical crystals in the blast furnaces of ironworks.

**TOAD'S BACK HANDRAIL.** One having a flattish curved upper surface.

**TOAD STONE.** A variety of trap rock.

**TOBBY.** In Scotland, a cover for a valve on an underground pipe. Same as Surface Box.

**TOBIN TUBE.** A bent tube of metal for admitting air taken from a low level externally, and entering at a higher level into a room.

**TO-FALL ROOF.** Same as Lean-to, which see.

**TOGGLE.** A small wooden pin tapering towards both ends; a button.

**TOGGLE JOINT.** An elbow or knee joint consisting of two bars which may be brought into a straight line.

**TOISE.** A French measure of length, about six and a half feet in English measure.

**TOLL BAR.** Formerly applied to a bar or beam, now applied to a gate on a canal or road to stop passengers or traffic until toll is paid.

**TOLL BRIDGE.** A bridge where toll has to be paid for passing it.

**TOLL GATE, TOLL HOUSE or BAR.** A gate or house where toll is taken.

**TOMB.** A sepulchre; a monument erected in memory of the dead.

**TOMBAC.** An alloy of copper and zinc.

**TOMBSTONE.** A monument or stone erected over a grave.

**TOMS.** Third quality Lancashire slates; sold by weight.

**TON.** A weight of twenty cwts. or 2,240 lb.; sometimes varies in different districts.

**TON.** In ships, forty cubic feet.

**TONDINO.** Same as Torus; the Italian for astragal.

**TON OF TIMBER.** Contains forty cubic feet.

**TON SLATES or WEIGHT SLATES.** Those sold by the ton.

**TONGUE.** A projection worked on the edge of a board to fit into a groove in the next board; a strip of wood or iron fitting into two grooves to secure a joint between two boards, etc.

**TONGUED AND GROOVED.** Secured by means of a tongue and groove, as match boarding, etc.

**TONGUED AND GROOVED BOARDING.** That having tongues and grooves for the purpose of securing it.

**TONGUED AND GROOVED JOINT.** That made by means of a tongue and groove.

**TONNAGE.** The cubical content or the weight in tons of goods which a ship can carry.

**TOOL.** A mason's chisel over two inches wide.

**TOOLED.** Marks of the mason's "tool" left on the face of stones.

**TOOLED WORK.** Consists of a regular description of chiselling in which the marks of the tool run in parallel lines, each successive stroke of the "tool" being made by the side of the last so as to form a series of parallel lines, each line extending across the whole breadth of the stone.

**TOON WOOD.** A wood obtained from a large East Indian tree, coarse grained and of a reddish-brown colour.

**TOOTHING.** Consists of projecting stones or bricks left in a wall, to which another wall is intended to be added in order to connect them securely together. The obsolete term is "zusses"; called "tuskings" in Scotland.

**TOOTHING.** A method of scratching the surface of wood about to be veneered, so as to form a key or grip for the glue. Tothing is generally performed by means of a

tooththing plane, the iron having a series of very small channels for the purpose.

**TOOTHING STONES or BRICKS.** The bricks or stones forming the tooththings.

**TOOTH ORNAMENT.** The term applied to an ornament used in Early English architecture; it consists of a square four-leaved flower, the centre of which projects in a point; the "dog-tooth ornament".

**TOP AND BOTTOM SETS.** A pair of swages, one being fixed in the anvil and the other being for striking with a hammer.

**TOP BEAM.** A collar beam.

**TOP DRAINING.** A draining of the surface of land.

**TOPIARY.** Shaped by cutting or clipping, as hedges, etc.

**TOPIARY WORK.** The giving of fanciful shapes to trees and hedges, or to their grouping; fancy gardening.

**TOPMAN.** A top sawyer.

**TOP RAIL.** The uppermost rail of a sash, door, framing, etc.

**TOPS AND BOTTOMS.** The thick top and bottom laths of Venetian blinds.

**TOP SAWYER.** The man working the pit saw on the top of a saw pit; his duty is chiefly to keep the saw to the line on the timber; the man in the pit is called the "pitman".

**TOP SOILING.** Taking off the top soil of land before a canal, railway, etc., is begun.

**TOP STONE.** The stone which forms the top.

**TORBAY PAINT.** That produced from a brown hematite iron found in Devonshire; containing 50 to 65 per cent. oxide of iron (varying in colour from yellowish-brown to red or black), the remaining portion being silicious matter.

**TORCHED.** Slates are said to be "torched" when the underside is rendered with lime and hair mortar, to assist in keeping out drifting snow and driving rain.

**TOREUMATOGRAPHY.** A description of ancient sculptures and basso-relievos.

**TOREUTIC.** Metallic carvings or

castings in relief, highly finished or polished; pertaining to art whether modelled, carved or cast.

**TORQUED.** In heraldry, wreathed.

**TORREFACTION.** The operation of torrefying.

**TORREFFY.** To melt, as metals.

**TORRELITE.** A mineral of a dull red-colour.

**TORRICELLIAN TUBE.** In pneumatics, a glass tube open at one end and hermetically sealed at the other.

**TORRICELLIAN VACUUM.** The vacuum produced by filling a tube with mercury and allowing it to descend till it is counterbalanced by the atmosphere.

**TORSE.** In heraldry, a wreath; twisted.

**TORSELS, TASSELS.** The pieces of timber lying under the mantel tree; the plates of timber for the end of a beam or joist to rest on.

**TORSION.** The act of twisting; the force with which a wire, rod or beam, when twisted, tends to return to its original state.

**TORSIONAL.** Pertaining to "torsion".

**TORSIONAL STRENGTH.** The resistance offered by a body to being broken by "torsion".

**TORSION BALANCE.** An instrument for estimating very minute forces by the action of a twisted wire or thread.

**TORSION ELECTROMETER.** An apparatus for measuring the intensity of electricity.

**TORSO.** The trunk of a statue deprived of the head and limbs.

**TORSTEN.** An iron ore of a bluish-black colour.

**TORTEAU.** In heraldry, a red roundel.

**TORUS, TORE.** A convex moulding having usually in masonry a semicircular section, and in joinery either a semicircular or semi-elliptical section with a fillet adjoining.

**TO TAKE OUT THE QUANTITIES.** To prepare a bill of quantities.

**TOUCHING.** A term applied in plumbers' work to the method of rubbing a tallow candle over a wiped joint.

**TOUCHING CIRCLES or TANGENT CIRCLES.** One circumference of a circle touching the circumference of another so that they meet but do not cut one another.

**TOUCHSTONE.** A variety of extremely compact silicious schist.

**TOUCH UP.** To improve old grained work, etc., by remedying the worst defects.

**TOUGH.** Applied to materials, flexible without being brittle.

**TOUGHENED CAST IRON.** That made by adding to cast iron, and melting amongst it, from a fourth to a seventh of its weight of wrought iron scrap.

**TOUGHENED GLASS.** That having had the brittleness removed by suddenly plunging it at a cherry red heat into oil.

**TOWER.** An erection of considerable height, either square or circular and generally flat on the top.

**TOWER BOLT.** A door bolt of a cylindrical form, which slides through sockets fixed on the plate.

**TOWER BASTION.** A small tower made in the form of bastions, with rooms or cells beneath.

**TOWERED.** Adorned, or having towers.

**TOWN HALL.** A public room or building for transacting the business of a town.

**TOWN HOUSE.** A term now generally applied to a town mansion, or a house of some pretension.

**TRABEATION.** Another term applied to an entablature.

**TRABS, TRABES.** A term applied to the wall plates in ancient temples; the Latin for wall plate.

**TRACERY.** The ornamental stonework in the upper part of Gothic windows, etc.; also used to a great extent in ecclesiastical woodwork.

**TRACING.** A copy of a drawing on a transparent paper; the method or act of tracing or drawing a copy of a drawing through a transparent paper, as tracing paper or linen.

**TRACING PAPER or LINEN.** A thin transparent paper or linen for tracing drawings.

**TRACK.** In Scotland, a foundation trench.

**TRACTATRIX.** A tractrix (which see).

**TRACTILE.** Capable of being drawn out in length, as iron, etc.; ductile.

**TRACTILITY.** The quality or property of being tractile.

**TRACTION.** In mechanics, the act of drawing a body along a plane, either by steam, horse or manual labour.

**TRACTION ENGINE.** A locomotive for drawing anything heavy along the roadway.

**TRACTRIX, TRACTORY.** A curve whose tangent is always equal to a given line.

**TRADE BUSHEL.** Applied to cement, is a weight established by practice and varying for each kind of cement.

**TRAIL.** A continuous enrichment of leaves, flowers, etc., in the hollow mouldings of Gothic architecture; also called "vignette".

**TRAIL.** In horticulture, to form to a wall or espalier; to lop, or to prune.

**TRAINING.** In horticulture, the operation or art of forming young trees to a wall or espalier.

**TRAIN ROAD.** A slight railway in mines, etc., for small wagons.

**TRAM.** A beam or bar on which a wagon or car runs.

**TRAMBLING.** The process of washing tin ore very clean with a suitable frame and shovel.

**TRAMMEL.** An instrument for drawing an ellipse, large circles, etc.; also applied to a "beam compass"; an iron hook to hang a kettle on.

**TRAM ROAD.** A road laid with rails for a tram car.

**TRAMWAY.** A street railway for cars.

**TRAMWAY CAR, TRAM CAR.** A car or carriage for running on a tramway.

**TRANSEPT.** That part of a church which projects at right angles from the body, nave or choir, and being equal, or nearly so, in height to it.

**TRANSFLUENT.** In heraldry, applied to water passing through a bridge.

**TRANSFORMER.** An apparatus for raising or lowering the pressure or

voltage, and is called "step up" or "step down" transformer according to its use.

**TRANSITION.** In architecture, applies to the changing of one style to another. The three periods of transition are Romanesque or Norman style to the Early English; from the latter to the Decorated, and from the Decorated to the Perpendicular, Tudor and the Elizabethan.

**TRANSITION ROCKS.** The lowest uncrystalline stratified rocks.

**TRANSITION STYLE OF ARCHITECTURE.** From the Norman to the Pointed, during the period between the years 1154 and 1189, shows a tendency to more grace and elegance of construction. In the transition from Early Pointed to Decorated, 1272 to 1307, tracery was introduced into the windows, whilst in the transition from 1377 to 1407, the tracery lines were less flowing.

**TRANSOM.** The vane of a cross-staff.

**TRANSOM, TRANSOMMER, CROSS BEAM.** A horizontal mullion or cross-bar in a window, door frame, etc.

**TRANSOM WINDOWS.** Those having horizontal mullions or rails or divided into two by a transom.

**TRANSPARENT.** Having the property of transmitting rays of light.

**TRANSPLANTING.** Uprooting a plant from one place and inserting it in another.

**TRANSPPOSITION.** In design, is the arrangement of an identical form in inverted positions, as, for instance, when the convex curve of a scroll is on repetition adjusted to a concave portion.

**TRANSTRA.** Horizontal timbers in a roof; the transverse beams of a gallery which extend from the sides and connect the ribs.

**TRANSVERSAL.** In geometry, a straight or curved line which traverses or intersects any system of other lines.

**TRANSVERSE.** The longer axis of an ellipse, *i.e.*, the major axis.

**TRANSVERSE.** Across, or lying in a cross direction.

**TRANSVERSE SECTION.** A cross section of anything.

**TRANSVERSE SEPTA.** See Medullary Rays.

**TRANSVERSE STRAIN.** A cross or side strain.

**TRANSVERSE STRENGTH.** The resistance offered by a body to forces acting across it, thus tending to bend and eventually to break it across.

**TRANSVERSE STRESS, BENDING STRESS.** That made up of a compressive stress, a tensile stress and a shearing stress; that stress tending to break material across.

**TRANSYTE.** A narrow or triforial passage.

**TRAP.** A contrivance for preventing vapours passing a denser body (water); used in drains; of various shapes and sizes; also called "stench trap".

**TRAP.** A heavy igneous rock, consisting of a mixture of felspar and hornblende.

**TRAP DOOR.** A door in a floor; or a flat door in a roof.

**TRAPEZIUM.** A plane figure contained under four right lines, none of which are parallel.

**TRAPEZOHEDRON.** A solid bounded by twenty-four equal and similar trapeziums.

**TRAPEZOID.** A plane four-sided figure like a trapezium.

**TRAPEZOIDAL.** Having the form of a trapezoid.

**TRAPPEAN.** Pertaining to or denoting trap rock.

**TRAPPOUS.** Pertaining to or resembling trap, or trap rock.

**TRAP SCREW.** A screwed plug closing an opening for cleaning out a lead trap.

**TRAP TUFF, TRAP TUFF.** A kind of sandstone from trap rocks.

**TRASH.** Loppings of trees, etc.

**TRASS.** A volcanic earth closely resembling pozzuolana, and is employed in the same way; found in different parts of Holland and on the Rhine between Mayence and Cologne.

**TRAPE.** A beam.

**TRAVELLER.** A travelling platform made to run on a raised tramway (or gantry); generally consists of two iron or wooden tressed girders fixed parallel to each other, three feet or

more apart, along the top of which a four-wheeled truck (traveller) runs on rails and carries a crab or winch at right angles to the traveller; used in buildings and yards for lifting baulks of timber, large stones, girders, etc.


**TRAVELLING CRANE.** A crane fixed on a traveller.

**TRAVERSE.** To plane a board, etc., in a cross or oblique direction.

**TRAVERSE.** In fortifications, a parapet made across the covert way.

**TRAVERSE.** A gallery or loft of communication in any large building; a kind of screen with curtains; used in chapels, halls, large rooms, etc., to give privacy.


**TRAVERTINE.** A white concretionary limestone, formed by springs holding lime in solution.

**TREACLE MOULD.** A term applied to the nosing or moulding of a water-closet flap; designed to afford a good grip to the fingers: .

**TREAD, TRED.** In staircasing, the horizontal board forming the step, or the width of it exclusive of the nosing or projection over the riser; that part of a step on which the foot is placed.

**TREENAILS, TRENAILS, TRENNELS.** Wood pins of large diameter; should be made of well-seasoned wood or they will shrink and become loose; used in roof trusses and large framing.

**TREFLE.** In fortifications, a lodgment of a trefoil shape.

**TREFOIL.** A geometrical figure used in tracery; it consists of three lobes or parts of circles joining each other like the clover leaf: .

**TREILLAGE.** In horticulture, a sort of railwork, consisting of light posts and rails, for supporting espaliers and frequently wall trees.

**TRELLIS.** A light lattice work of thin laths or wire.

**TRELLISED.** Having trellises or lattice work.

**TRELLIS WORK.** Work having trellis or lattice work formed of laths or metal.

**TRENCH.** In joinery, a groove cut across the grain of wood.

**TRENCH.** In fortifications, a deep ditch cut for defence or for raising a rampart.

**TRENCH.** A ditch cut for the foundations of a wall or building.

**TRENCHING.** In joinery, grooving across the grain

**TRENDE.** A little wheel.

**TRESSURE.** In heraldry, a border running parallel with the sides of the escutcheon.

**TRESTLE.** The frame of a table; a portable support of various forms, and used for various purposes, as for supporting a paper-hanger's board, scaffold poles (in road repairing) to stop traffic, etc.

**TRET.** An allowance of four pounds on every 104 for waste or impurities.

**TRIANGLE.** A figure bounded by three lines and containing three angles.

**TRIANGLED.** Having three angles.

**TRIANGULAR.** Having three angles; in the form of a triangle.

**TRIANGULAR COMPASSES.** Those having three legs by which any triangle or any three points may be taken at once.

**TRIANGULATION.** The use of a series of triangles in a trigonometrical survey.

**TRIAS.** A term sometimes applied to the upper new red sandstone.

**TRIASSIC.** Pertaining to or composed of trias.

**TRIBLET.** A cylinder for making tubes.

**TRIBOMETER.** An instrument for measuring the friction of metals.

**TRIBUNE.** A pulpit, rostrum or elevated platform in a church, chapel or public hall.

**TRICLINIUM.** A Roman dining hall; a couch round three sides of a table; used by the Romans.

**TRICUSPID.** Having three points or cusps.

**TRIFOLIATE.** Having three leaves.

**TRIFOLIUM.** Trefoil.

**TRIFORIUM.** A gallery or arcade between the vaulting and the roof, or in the wall over the arches separating the body from the aisles of a church.

**TRIGLYPHS.** The upright blocks or tablets peculiar to the Doric frieze; consists of rectangular projections repeated at equal intervals.

**TRIGLYPHIC.** Pertaining to or consisting of triglyphs.

**TRIGON.** A three-sided figure or polygon, the sides being at an angle of  $60^\circ$ .

**TRIGONAL.** Triangular.

**TRIGONOMETRY.** The art of measuring or determining the sides and angles of triangles, either plane or spherical.

**TRIGYNIAN.** Having three styles.

**TRIHEDRAL.** Having three sides.

**TRILATERAL.** Having three sides.

**TRILITHON.** Three monumental stones placed together like door-posts and a lintel.

**TRIM.** In carpentry and joinery, to dress or make smooth; to "trim" is to insert a "trimmer" or "trimming joist".

**TRIMMED, TRIMMED IN.** A piece of work fitted between others previously executed, as a post between two beams; a trimmer between joists.

**TRIMMED OUT.** The trimmer of a stair is said to be "trimmed out" when brought forward to receive the rough strings.

**TRIMMER.** A small beam, joist or rafter, inserted in a roof, floor, partition, etc., to support the ends of any joists, rafters, etc., which cannot from particular circumstances (such as round a fireplace or round the space left for stairs, etc.) be placed upon the walls or any of the main timbers.

**TRIMMER ARCH.** A small brick arch for supporting a hearth of a fireplace on an upper floor.

**TRIMMING.** The insertion of a trimmer round openings in floors, such as fireplaces, trap doors, well holes for stairs, etc.

**TRIMMING JOISTS.** The two joists into which a trimmer or trimmer joist is framed.

**TRIMMING RAFTERS.** The two rafters into which a trimmer is framed, as round a skylight or chimney.

**TRINE DIMENSIONS.** The dimen-

sions of a solid, including length, breadth and thickness; the same as three-fold dimensions.

**TRINGLE.** A little square member or ornament; a lath between the posts of a bed; a curtain rod.

**TRINIDAD ASPHALT.** Consists of Trinidad pitch, broken stone, chalk, etc., melted and laid hot.

**TRIP HAMMER.** A tilt hammer.

**TRIPLE AND QUADRUPE RIVETING.** Those formed by three or four rows of rivets respectively.

**TRIPOD.** A table or seat with three legs.

**TRIPOD.** A three-legged stand for a level or theodolite in surveying.

**TRIPOD.** The seat over the altar on which the priestesses of Apollo in ancient times were placed.

**TRIPTYCH, TRIPTIC.** A set of three tablets hinged together and capable of being folded; seen in altar pieces.

**TRIQUETROUS.** Three sided; three cornered.

**TRIRHOMBOIDAL.** Having three rhombic faces or sides.

**TRISECT.** To divide into three equal parts.

**TRISECTION.** Division, as an angle, into three equal parts.

**TRISOCTAHEDRON.** A solid bounded by twenty-four equal faces.

**TRISPASTON.** A machine with three pulleys for raising great weights.

**TRIVET or TRIPOT.** A movable iron bracket attached to the top bar of a grate.

**TROCHILUS or TROCHYLUS.** A hollow ring round the base of a column, *i.e.*, the scotia; a hollow moulding.

**TROCHOID.** A curve generated by the motion of a wheel.

**TROLEY.** A low truck for carrying materials.

**TROMP.** A blowing machine used in furnaces.

**TROPHY.** An ornament representing the trunk of a tree charged with arms and military weapons.

**TROTTOIR.** A side walk for pedestrians.

**TROUGH GUTTER.** A wooden gutter in the form of a trough; sometimes lined with zinc and placed below the eaves of a roof; called "box gutter" in Scotland.

**TROWELLED STUCCO.** In plastering consists of two-thirds of fine stuff to one-third of very fine clean sand; it is the best sort of plastering for the reception of paint; generally formed on a floated coat of work by means of a hand float.

**TRULLISATION.** The laying of plaster with a trowel.

**TRUMPET MOUTH.** The end of a pipe which is widened out.

**TRUNCATED.** With an edge or corner cut off.

**TRUNCATED ROOF.** A roof with a flat top.

**TRUNDLE HEAD.** The wheel that turns a millstone.

**TRUNK.** That part of a pilaster or column between the base and the capital.

**TRUNK.** A large wooden pipe of rectangular or square section.

**TRUNK LINE.** The main line of a railway or canal.

**TRUSS.** A framed assemblage of timbers for carrying a load between two points of support, as a roof truss.

**TRUSS.** A bracket or console.

**TRUSS OR ROOF PRINCIPAL.** Consists of an assemblage of timbers framed together so as to give mutual support to each other. Wooden partitions, ancones, consoles and brackets are sometimes called trusses.

**TRUSS.** A large ornamental bracket.

**TRUSSED GIRDER.** One strengthened by means of struts.

**TRUSSED PARTITION, TRUSS PARTITION.** A quarter partition containing a truss; generally consisting of a quadrangular frame, two braces and two queen posts with a straining post between them.

**TRUSSED PURLIN.** A truss used in the place of an ordinary purlin; a purlin strengthened by means of struts.

**TRUSSED ROOF.** A roof formed by a series of trusses or principals.

**TRUSSING PIECES.** Those timbers in a truss that are in a state of compression.

**TRUSS POST.** A post in a trussed roof, such as a king post, queen post, etc.; also applied to the posts into which the braces are framed in a trussed partition.

**TUBBING.** Lining a well with iron or other material to keep back surface springs; the lining itself.

**TUBULAR BRICKS.** Those hollow bricks having one large perforation running through their length.

**TUBULAR BRIDGES.** Those formed by disposing the materials in the form of a horizontal tube, for the passage of traffic.

**TUCK POINTING.** In brickwork, consists of the joints being raked out and filled up flush with mortar and rubbed over with a soft brick until both joints and bricks are the same colour; a narrow groove is then run along the centre of each joint and filled in with white or black mortar so that it will project about an eighth of an inch from the face of the wall.

**TUDOR OR ELIZABETHAN STYLE OF ARCHITECTURE.** A debased species of Perpendicular, mostly employed in domestic architecture from 1550 to 1600.

**TUDOR ARCH.** The four-centred or elliptic Gothic arch.

**TUEFALL.** A pent house.

**TUFA, TUFF.** A light porous rock of volcanic ashes or a calcareous earth composed of broken concreted shells.

**TULA METAL.** An alloy of silver with copper and lead.

**TUMBLER.** The part of a lock which holds the bolt in position until moved by the key.

**TUMBREL.** A wicker crib for holding hay.

**TUN.** A term sometimes applied to the shaft of a chimney.

**TUNGSTEN, MANGANESE, CHROMIUM OR CHROME STEEL.** That produced by adding a small percentage of the metals named to crucible steel; this produces a steel of great hardness and tenacity.

**TUNNEL.** A large subterranean arch or artificial passage through a hill, etc., for a road, railway or canal.

**TUNNEL HEADS.** A term applied to bricks concave on the under side and convex on the top.

**TUNNEL KILNS, CONTINUOUS, RUNNING, PERPETUAL or DRAW KILNS.** Are those in which the fuel and stone are placed in alternate layers, and is shaped internally either like a cylinder, an inverted cone, or a pair of vertical cones base to base.

**TUNNEL PIT.** A shaft sunk from the top of the ground to the level of an intended tunnel, for drawing up the earth and stones.

**TUP or TRIP.** A term applied in some districts to the ram or monkey of a pile engine.

**TURBINE.** A horizontal water wheel.

**TURF DRAIN.** A drain filled with turf or peat.

**TURF HEDGE.** A hedge or fence formed with turf and plants.

**TURF HOUSE.** A house or shed formed of turf.

**TURFING.** The operation of laying down or covering with turf.

**TURFING IRON.** An implement for paring off turf.

**TURFING SPADE.** An instrument for undercutting turf when marked out.

**TURF SPADE.** A long narrow spade for cutting and digging turf.

**TURKEY UMBER.** That composed of a bituminous earth.

**TURNBUCKLE.** A common fastening for a cupboard door or shutter.

**TURNER'S YELLOW.** A pigment produced from oxychlorides of lead.

**TURNING BAR, CHIMNEY BAR.** A bar of iron about a half an inch thick and three inches wide, slightly curved to fit soffit, and placed across a fireplace to carry the arch.

**TURNING PIECE.** A board with an edge convex for turning a thin brick arch upon.

**TURN OUT.** A railway siding.

**TURNOVER TOPS.** A term applied to the tops of the vertical bars of an iron railing when bent over on the top to prevent persons climbing.

**TURNPIKE STAIR or TURNGRECE.** See Spiral Stair.

**TURNPIN, TURNING PIN, TAMPION, TAFTPIN.** A tool used by plumbers to open or enlarge the end of a pipe to receive the end of another, in order to make a joint; made of box or other hard wood, and is similar in shape to a mason's plumb bob.

**TURNSTILE.** A gate working on a pivot.

**TURNTABLE.** A large revolving platform for turning cars, locomotives, etc., in a different direction.

**TURPENTINE.** A transparent resinous substance flowing from several species of trees.

**TURPENTINE VARNISHES.** Consist of common or bleached resin dissolved in oil of turpentine under a slight heat.

**TURPS, SPIRITS OF TURPENTINE, OIL OF TURPENTINE.** Is produced by distilling turpentine tapped from the pine or larch; the residuum left after distillation is common resin; the best oil is obtained from America; mixed with paint to save the oil and make it work more freely.

**TURRET, TURETTE, TOURET.** A small tower attached to a building and rising above it; also applied to a large pinnacle.

**TURRETED.** Formed like a tower; furnished with turrets.

**TUSCAN ORDER.** The simplest of the five classic orders of architecture; it somewhat resembles the Doric.

**TUSK or TUSS.** In Scotland, the same as "toothings" (which see).

**TUSK, HORN, GAIN.** Terms applied to the bevelled upper shoulder of a tenon made in order to give strength to the tenon known as a "tusk tenon".

**TUSK TENON.** A tenon that goes right through the piece at right angles to it, and projecting enough to allow its being secured with a pin on the outside; chiefly used for "trimmers".

**TUSS.** Same as Tusk.

**TUTTY.** An impure protoxide of zinc collected from the chimneys of smelting furnaces.

**TUYERE.** The blast pipe in blast furnaces.

**TWENTY-PENNY NAILS.** Generally applied to those about three and a half inches long.

**TWENTY STYLES OF ARCHITECTURE,** with their chief characteristics, according to ancient remains, are :—

*Prehistoric.*

*Phœnician.* A wall of stones marking out a tri-apsal space.

*Celtic.* Two upright stones with a third laid horizontally across them.

*Pelasgic.* Massive piles, the courses overlapping each other till they meet at the top, forming a roof.

*Etruscan.* Stones cut wedge shape and arranged in a semicircle which supports itself by its own weight.

*Barbaric.*

*Egyptian.* A style belonging to antiquity ; its chief characteristics are low heavy columns, carved in imitation of vegetable forms, supporting a massive flat stone roof.

*Persian.* A style belonging to antiquity ; its chief characteristics are tall slender columns with capitals resembling animal forms supporting a light flat roof of stone, imitating wood-work.

*Indian Style of Architecture.* Belongs to modern times ; its chief characteristics are structures rising many storeys, each storey smaller than the lower one ; a rude type of construction with excessive ornament.

*Mexican Style of Architecture.* Also belongs to modern times ; its chief characteristics are pyramidal structures rising in terraces ; stairs lead to the summit which is crowned with a low chamber.

*Classic.*

*Greek.* Cabin - formed or gable-roofed structures having a portico with fluted columns.

*Roman.* An arch with columns attached to the front.

*Latin.* In this style the arch is mounted upon the columns.

*Byzantine.* A system of domes resting upon arches.

*Romantic Mediæval.*

*Arabian.* A style characterised by a bulbous arch, either round or pointed, under a flat roof.

*Romanesque.* A style characterised by arches in receding planes supported by little pillars ; flat buttresses.

*Gothic.* Characterised by the pointed arch under a sharp gabled roof ; buttresses surmounted by pinnacles.

*Northern Renaissance.* Characterised by tall square-headed windows, divided by mullions and transoms into four lights.

*Revived Classic.*

*Florentine.* Characterised by arches of rusticated stonework.

*Roman.* Characterised by windows encased in diminutive Greek fronts.

*Venetian.* Characterised by a combination of the Roman and Latin arch with the Greek order.

*Parisian.* Characterised by outstanding coupled columns and a cut pediment.

**TWICE KILNED LIME.** That when a compact limestone is burnt and slaked and then mixed with clay and burnt a second time.

**TWISTED FIBRES.** In timber, are caused by the action of a prevalent wind turning the tree constantly in one direction.

**TWO BOLT LOCK.** A lock with two bolts, one acted on by the handle and the other by the key.

**TWO COAT WORK.** In plastering, when only two coats are applied.

**TYING.** In mining, a term applied to the washing of ores.

**TYMPANUM.** A drum-shaped wheel placed round an axis for raising weights.

**TYMPANUM.** The enclosed surface of the front of a pediment, i.e., the

space enclosed by the horizontal and the two raking or sloping cornices.

**TYMPANUM.** The head of an arch or arcade over a door or other aperture is also termed a tympanum.

**TYMPANUM.** The panel of a door; a triangular space in the corners or sides of an arch, which is also called a "spandrel".

**TYPE.** The canopy over a pulpit.

## U.

**UDAL.** In law, a freehold estate.

**UDOMETER.** An instrument for measuring the rainfall.

**ULLAGE.** The quantity which a cask is short of being full.

**ULMACEOUS.** Pertaining to the elm.

**ULMIC.** Produced by decaying vegetable matter.

**ULMIN.** A brown pigment.

**ULTERIOR.** On the outside of any line or boundary.

**ULTIMATE or BREAKING STRESS.** Is one that would produce fracture; it is the stress produced by the "breaking load".

**ULTIMATE STRENGTH.** The intensity of stress required to produce fracture in any specified way.

**ULTRAMARINE, ULTRAMARINE BLUE.** A blue pigment produced by grinding the valuable mineral lapis-lazuli.

**ULTRAMARINE BLUE.** The French and German ultramarines are artificial; they are cheaper and a better colour than the pure; made by fusing, washing and reheating a mixture of soda, silica, alum and sulphur.

**UMBER.** An ore of iron of a dark brown colour; used as a pigment.

**UMBO.** The boss or protuberant part of a shield.

**UMBONATE, UMBONATED.** Having a boss or elevated point in the middle.

**UNANNEALED.** Not tempered by heat; suddenly cooled.

**UNCOURSED RUBBLE, RANDOM RUBBLE.** That composed of stones laid without any attempt at regular courses.

**UNDECAGON.** A polygon, or an eleven-sided figure.

**UNDER BED.** The under surface of a stone or brick.

**UNDER BOX.** The fixed valve box of a common pump.

**UNDERBRACED.** Said of a truss when constructed in the shape of a deformable figure, as a queen post truss.

**UNDERCLAY.** A stratum of clay underlying coal.

**UNDERCLOAK.** The edge of the sheet of lead which is in the inside of a seam roll, the edge of the other sheet on the outside being called the "overcloak".

**UNDERCROFT.** A vault under a church or chapel; a vault under the choir or chancel of a church; a crypt.

**UNDERDITCH.** To form a deep ditch or trench to drain the surface of land.

**UNDERDRAIN.** A drain or trench below the surface of the ground; to drain by cutting a trench or ditch below the surface.

**UNDERPIN.** To lay stones or bricks underneath the foundations of a wall, so as to give additional support, or replace a defective portion; called "underfooting" in Scotland.

**UNDERPINNING.** The temporary support of a wall whose lower part or foundations are defective, and the bringing up new solid work whereon it is in future to rest.

**UNDERPITCH GROIN.** Same as Welsh groin.

**UNDERSSET.** A contrary current of water below the surface.

**UNDERSHOT.** Moved by water passing under the wheel.

**UNDERSHOT WHEEL.** A water wheel with a number of flat boards to receive the "undershot" or water passing beneath.

**UNDERSIZED LOGS.** Those under twelve inches square.

**UNDERSOIL.** Subsoil; the soil beneath the surface.

**UNGLAZE.** To remove the glass from windows, etc.

**UNGLAZED.** Not furnished with glass; not covered with glaze.

**UNGULA.** A section or part of a cylinder, cone, etc., cut off by a plane oblique to the base.

**UNICORN.** In heraldry, a fabulous animal represented with the figure of a horse with a horn on its forehead.

**UNIFORM MOTION.** The velocity of a moving body when it passes over equal distances in equal times.

**UNION JET.** In Scotland, a fish-tail burner.

**UNION JOINT.** A brass connecting joint; used to connect the ends of two pipes.

**UNIT.** The "unit" is the commercial unit of electrical work done, as read from the meter, the greatest charge as limited by Act of Parliament being eightpence per "unit". It is equal to 1,000 watt hours—1,000 (1 volt  $\times$  1 ampère  $\times$  1 hour). "Unit" is really a name and the product of units, and is only a unit commercially, as 1,000 feet of gas might be styled a "unit".

**UNIT (B.A.).** The British Association devised in 1863 the system of "practical units". The unit styled B.A. unit or ohm was fixed as the resistance of certain standard coils of German silver wire.

**UNIT (Legal Ohm).** The legal ohm is the resistance of a column of mercury of one square centimeter in section and six centimeters in length. One B.A. ohm = .9887 legal ohm.

**UNIT OF WORK.** Any known determinate quantity, by the constant repetition of which any other quantity of the same kind is measured.

**UNITS (C.G.S.).** A system of purely theoretical units derived from the centimeter, gramme and second.

**UNIVERSAL CHUCK.** A circular plate to screw on the mandrel of a lathe, to hold any small material to be turned or bored.

**UNIVERSITY.** An assemblage of colleges.

**UNPAVED.** Not paved with stone, bricks, etc.

**UNROOF.** To strip off the roof of a house, etc.

**UNSCORIFIED.** Not converted into dross.

**UNSEALED.** Said of a water-closet trap when there is a free passage of air through it, owing to there being a deficiency of water in the trap.

**UNSEASONED.** Said of wood not prepared or ready for use in building.

**UNSOILING.** Stripping off the upper layer of mould.

**UNWROUGHT.** Not planed; not machined.

**UPHAND HAMMER.** A hammer used by a smith, lighter than a "sledge".

**UPHERS.** Fir poles from twenty to forty feet long and from four to seven inches in diameter; used for scaffolding, ladders, etc.

**UP-LINE.** The line of a railway that leads up to the central station.

**UPPER BED.** The upper surface of a stone or brick.

**UPRIGHT.** A vertical post; vertical; an elevation.

**UPRIGHT.** An "upright" in brick-laying is a double battering wall.

**UPRIGHT PANEL.** In joinery, a panel with the grain running vertically.

**UPSET.** Working up a thin bar of iron to make it thicker at any part.

**UPSETS.** Portions of timber in which the fibres have been injured by crushing, as in felling the tree, or in removing the logs to the point of shipment.

**UPSTART.** A term sometimes applied to a "stool" (which see).

**UPSTART.** In Scotland, stone window or door jambs set vertically, sometimes the full height of the opening, sometimes interrupted by inband or outband rybates in the top and bottom.

**URBAN.** Belonging to a city or town.

**URINAL.** A street convenience in which to pass urine; generally consists of several stalls.

**USTULATION.** The operation of expelling one substance from another by heat; as in smelting.

## V.

**V.** As a Roman numeral, V stands for five, and with a dash over it for five thousand.

**V GUTTER.** That of a V section.

**V GUTTER.** A gutter whose bearers are nailed to the sides or backs of the rafters.

**V JOINT.** A joint made by two adjoining edges being chamfered, which forms a V joint when placed together.

**V JOINT POINTING, WEATHER JOINT POINTING.** That in which the mortar is filled in the joint, and finished off with a V shaped projection on the lower side to throw off the wet.

**V ROOF.** That having two slopes inclining inwards in the shape of a V from two vertical side walls.

**VACUUM.** Space empty, or devoid of all matter; generally used in "pneumatics".

**VAGINA.** The lower part of a "terminus" in which the statue is apparently placed or inserted.

**VAIR.** In heraldry, a fur represented by little bell-shaped pieces alternately of two colours.

**VALANCE.** Drapery or hangings for a window, bedstead, etc.

**VAL DE TRAVERS ASPHALT.** That made from a rock saturated with bitumen found at Neuchâtel, in Switzerland; it is laid in two different ways, either in a powder compressed by ramming into a solid condition or by melting and spreading.

**VALE.** A little trough or canal.

**VALLEY.** The gutter or internal angle formed by two inclined sides of a roof; called a "flank" in Scotland.

**VALLEY BOARDS.** Those fixed on the valley rafters for the lead gutter of the valley to rest on.

**VALLEY GUTTER.** One formed on the valley of a roof.

**VALLEY RAFTER, VALLEY PIECE.** The rafter or "timber" forming the valley in a roof; sometimes called "flank".

**VALLEY TILE.** A tile of V shape to fit the valley of a roof.

**VALLUM.** A rampart.

**VALVATE.** Having or resembling a valve.

**VALVE.** Any apparatus, lid or cover to close an aperture in a pipe. There are many forms for many purposes.

**VALVE CLOSET.** A mechanical arrangement consisting of a basin, which is provided with a close-fitting valve, underneath which is fixed a trap, generally a syphon or anti D trap.

**VALVE COCK.** A kind of sliding shutter put in motion by means of a screw; generally used for wrought iron pipes.

**VALVED.** Having or composed of valves; anything which opens on hinges.

**VALVE SEAT.** The flat or conical surface upon which a valve rests.

**VALVE TRAPS or FLAPS.** Those fixed into the sides of sewers to receive the first length of pipe forming the drain; used to prevent the return of anything from the sewer, as rats, etc.; they are either made all of iron or earthenware with iron flaps.

**VALVLET.** A little valve.

**VANADINITE.** A mineral, vanadate of lead.

**VANDYKE.** To ornament by forming indentations.

**VANDYKE BROWN.** An earthy mineral pigment of a dark brown colour; durable in oil or water; very useful in graining.

**VANDYKING PIECE.** The piece of lead left after cutting out a stepped flashing.

**VANE, WIND VANE.** A plate of metal with the points of the compass on it turning on a vertical spindle, moved by the action of the wind; sometimes in the form of a cock (weather-cock), placed on spires and other elevated positions to show the direction of the wind.

**VAN-FOSS.** In fortifications, a ditch on the outside of the counterscarp.

**VANISHING LINE.** In perspective, the intersection of the parallel of any original plane and the picture or drawing.

**VANISHING POINT.** In perspective, the point to which all parallel lines in the same plane tend in the representation.

**VANNING.** A rocking motion given to a shovel when removing the impurities from tin ore.

**VANQUELINITE.** Chromate of copper and lead; of various shades of green.

**VARIATION OF CURVATURE.** The change in a curve by which it becomes thicker or flatter in its different parts.

**VARNISH.** Consists of a solution of resin in either turpentine, oil or alcohol; when applied, the oil dries and the other two solvents evaporate, in either case leaving a solid transparent film of resin over the surface varnished. Varnishes are classified as "spirit varnish," "turpentine varnish," "oil varnish" or "water varnish," according to the solvent used, and generally called by the name of the gum dissolved in them.

**VARNISHING.** The act of laying on varnish; the work varnished.

**VARVICITE.** An ore of manganese.

**VASE.** A vessel of various forms; chiefly used as an ornament.

**VASE.** The bell or naked form to which the foliage and volutes of the Corinthian and Composite capitals are applied.

**VAT.** A square hollow place on the back of a calcining furnace, where tin ore is laid to dry.

**VAT.** A large tank or cistern; used for various purposes.

**VATICAN.** The palace of the Pope on the Vatican Hill in Rome.

**VAULT.** An arched roof of a circular, elliptical or Gothic form, so constructed that the stones by their disposition support each other; a chamber (especially underground) with an arched roof.

**VAULT.** A chamber underground for the repository of the dead.

**VAULTAGE.** Vaulted work; an arched cellar or chamber underground.

**VAULTED.** Covered with a vault; arched; concave.

**VAULTING SHAFT.** A small column or pillar which supports the ribs of a vault; they sometimes rise from the floor, corbel or the capital of a larger pillar; a small turned pillar similar to a vaulting shaft has been lately introduced into shop fronts.

**VAULTY.** Arched; concave.

**VAUNT-MURE.** In fortifications, a work raised in front of the main wall.

**VEGETABLE BLACK.** A superior kind of lampblack made from oil; very light, good colour, free from grit; raw linseed oil or turps keeps it from drying; should therefore be used with driers, boiled oil and a little varnish.

**VEHICLES.** Are liquids capable of holding colouring matters or pigments in suspension, and distributing them evenly over the surfaces to be treated; they consist of water, oil or spirits of turpentine.

**VEIN.** To imitate the streaks or veins of marble in painting.

**VEIN.** A streak or wave of different colour appearing in wood, marble and other stones.

**VEINS.** In slates, are dark marks running through them along which they are very liable to split.

**VEIN STONE.** The rock or mineral material which accompanies or encloses ores in veins.

**VELLAR CUPOLA.** A term applied (by Alberti) to a dome or spherical surface terminated by four or more walls.

**VELOCIMETER.** An apparatus for measuring the rate of speed of machinery.

**VELOCITIES AND EFFECTS OF WIND :—**

Characteristics.	Miles per hour.	Pressure per sq. ft. in lb.
Hardly Perceptible	1	0.009
Just Perceptible	2	0.020
Gentle Breeze	5	0.123
Brisk Wind	10	0.492
Very Brisk Wind	20	1.968
"	25	3.075
High Wind	35	6.027
Very High Wind	45	9.963
Storm	50	12.300
Great Storm	60	17.715
Hurricane	80	31.490
Great Hurricane	100	49.200

**VELOCITY.** In dynamics, the ratio of the quantity of linear extension passed over in a certain time.

**VELOCITY OF MOTION OF MOVING BODIES** (Peschel's *Elements of Physics*) :—

	Feet per second.
Rivers . . . . .	3-4
Rapid Stream . . . . .	13
Wind (ordinary) . . . . .	10
Storm . . . . .	54
Hurricane . . . . .	80-120
Sound (through air) . . . . .	1,100
Sound (through metal) . . . . .	12,000
Air into vacuum . . . . .	1,280
	Miles per second.
Light . . . . .	200,000
Electricity . . . . .	576,000

**VENEER.** A very thin piece of wood or marble of superior quality for overlaying or covering an inferior ground.

**VENEERED WELL.** In staircasing, is when the string is reduced at the well hole to the required thickness and bent round a cylinder and glued and blocked.

**VENEERING.** The material, act or method of covering with veneer.

**VENEERING HAMMER.** That used to work the superfluous glue out from beneath the veneer; it is sometimes made of a flat square of hard wood or iron, with a handle stuck in perpendicularly; sometimes the tail of the ordinary hammer is used as a substitute.

**VENETIAN BLIND.** A blind for windows made of thin laths, tape, etc.

**VENETIAN DOOR.** A door having side lights or narrow windows at the sides.

**VENETIAN LAKE.** A pigment made from cochineal.

**VENETIAN RED.** A pigment obtained by heating sulphate of iron produced as a waste product of tin and copper works; when pure it is known as "bright red".

**VENETIAN SHUTTER.** An external shutter consisting of a frame with small louvres. Same as *Jalousie*.

**VENETIAN STYLE OF ARCHITECTURE.** Is characterised by a combination of the Roman and Latin arch with the Greek order.

**VENETIAN WINDOW.** That formed

with three openings separated by slender piers, or by boxings in a Venetian sash frame, the centre opening being larger than the side ones.

**VENICE TURPENTINE.** That obtained from the larch tree; grown principally in the mountain valleys between France and Savoy.

**VENICE WHITE.** A white pigment composed of white lead and sulphate of baryta in equal proportions.

**VENT.** A hole or passage for air or other fluid to escape.

**VENT.** In Scotland, a flue.

**VENT.** The flue or funnel of a chimney; a conduit for carrying off anything offensive.

**VENT LININGS.** Earthenware pipes used for lining flues in stone walls.

**VENTIDUCT.** A passage or pipe for the introduction of fresh air to an apartment.

**VENTILATE.** To supply with a free passage for air.

**VENTILATING GRATE.** That constructed so as to admit warm air into the room.

**VENTILATING SLIP.** A narrow piece of wood ploughed and tongued in the sill of a sash frame, so that when the sash is raised the ventilation comes through the space between the meeting rails.

**VENTILATION.** The act of ventilating; a free passage for fresh air.

**VENTILATOR.** A contrivance of various forms, for drawing off foul air and introducing a supply of fresh pure air.

**VENTURINE.** A powder made of fine gold which is strowed upon the first layer of varnishing laid in japanning.

**VERANDAH.** A covered passage or open portico formed by extending a sloping roof from an external wall of the main building.

**VERD ANTIQUE.** A mottled green serpentine marble; a green porphyry used as marble; a green incrustation on ancient coins, brass or copper.

**VERDIGRIS.** Acetate of copper, which furnishes a green pigment durable in oil or varnish but not in

water; dries rapidly; a dangerous pigment to use.

**VERDITER.** A blue or green pigment produced from a sulphate or nitrate of copper.

**VERDITURE.** The faintest and palest green.

**VERDOY.** In heraldry, a border charged with leaves, fruit, etc.

**VERGE.** A small ornamental shaft in Gothic architecture.

**VERGE BOARD.** Same as Barge Board.

**VERGE TILE.** A wide tile to bond in with ordinary tiles at the verge instead of using half tiles.

**VERMICULATED WORK.** Rustic work wrought so as to give it the appearance of having been eaten into by worms.

**VERMICULATED WORK.** That used in large base stones, the face being first chiselled, and afterwards large deep holes are picked out, no mark of the tool being left.

**VERMICULATION.** A checkering in masonry giving it the appearance of having been worm-eaten.

**VERMILION.** Sulphide of mercury, used as a red pigment; found in a natural state, the best being obtained from China. Vermilion if pure is very durable, but if adulterated with red lead, etc., it will not weather.

**VERNIER.** A graduated scale which subdivides the smallest divisions on a straight or circular scale.

**VERONA YELLOW.** A pigment produced from oxychlorides of lead.

**VERSED SINE OF AN ARC.** A straight line drawn from the middle of the chord of an arc perpendicular to that chord and meeting the circumference within the arc.

**VERST.** A Russian measure of length containing 3,500 feet.

**VERT.** In heraldry, a green colour.

**VERTEX.** The top or the termination of anything finishing in a point.

**VERTEX OF A CONE.** The point or its apex.

**VERTEX OF A CURVE.** The extremity of the axis or diameter, or

the point where the diameter meets the curve.

**VERTEX OF A PYRAMID.** The point or its apex.

**VERTICAL.** Perpendicular to the plane of the horizon; upright.

**VERTICAL ANGLES.** The opposite ones made by two straight lines cutting each other.

**VERTICAL DAMP COURSE.** That when the ground outside a wall is higher than the wall plate inside, the damp course is then taken up the face of the wall to the level of the ground or just above it.

**VERTICAL LINE.** That perpendicular to a horizontal line or plane.

**VERTICAL PLANE.** One whose surface is perpendicular to the horizon, or a horizontal or level line.

**VERTICAL PLANE.** In the "conic sections," a plane passing through the vertex and axis of a cone.

**VERVE.** A sculptured ram's head.

**VESICA PISCIS.** A pointed oval figure formed by two equal circles, the centre of one on the circumference of the other; a form given to panels, etc., in mediæval work.

**VESTIBULE.** Any lobby, porch, hall or antechamber through which a building or house is entered.

**VESTIBULE SCREEN.** A screen across a "vestibule," the upper part generally being chiefly of glass.

**VESTIBULUM.** Part of the andronitis of a Greek house.

**VESTMENT.** A set of hangings for an altar; generally applied to the robes of the priest or clergyman.

**VESTRY.** A room appendent to a church, in which the clerical vestments and sacred utensils are kept.

**VIA.** Roman term for a road.

**VIADUCT.** A construction of arches to carry a road or a railway over low ground.

**VIAMETER.** An instrument for measuring distances in travelling. Same as Odometer.

**VIARIAN.** Pertaining to roads.

**VIBRATE.** To quiver, to tremble, as machinery in motion; to measure by oscillating.

**VIBRATION.** The act of vibrating or trembling.

**VICARAGE.** The official residence of a vicar.

**VICE, VISE.** Ancient term for a spiral or winding staircase.

**VICE.** A contrivance of wood or iron with a strong screw for holding material while being operated on.

**VICTORIA FLOORS.** Floors having two thicknesses of boards.

**VICTORIA STONE.** An artificial stone consisting of washed fine powdered granite or Portland cement, and hardened by immersion in silicate of soda.

**VIENNA GREEN.** A pigment produced from arsenites of copper; it is highly poisonous.

**VIGNETTE.** An ornament formed by a winding stem with leaves and tendrils.

**VIHARA.** A Buddhist temple or monastic establishment.

**VILLA.** A suburban residence; formerly, among the Romans, a farm or country house.

**VILLA RUSTICA.** Formerly, a tastefully designed country residence.

**VILLA URBANA.** Among the Romans, a villa residence with its interior similar to that of a town house.

**VINERY.** A house or an erection for supporting vines and exposing them to artificial heat.

**VIRRII.** In Scotland, a ferulo.

**VIRTUAL SLOPE.** The slope of the plane of saturation, or in the case of an imprisoned body of water, the hydraulic gradient between the collecting ground and the outlet.

**VIRTUAL VELOCITY.** That which a body in equilibrium would actually acquire during its first motion in case of the equilibrium being disturbed.

**VISCOUNTESS.** A slate eighteen by ten inches.

**VISE.** A spiral staircase with a solid newel.

**VISTA.** Trees, etc., forming an avenue; the view through an avenue.

**VISUAL LINE or RAY.** A line or ray of light supposed to come from a point of the object to the eye.

**VISUAL POINT.** In perspective, a point in the horizontal line in which the visual rays unite.

**VIS VIVA.** Of a body, is its mass multiplied by the square of its velocity.

**VITREO-ELECTRIC.** Containing or exhibiting positive electricity, or that which is excited by rubbing glass.

**VITREOUS.** Obtained from glass; consisting or resembling glass.

**VITRIFIABLE.** Capable of being converted into glass by heat and fusion.

**VITRIFICATION.** The hardening of argillaceous stones by heat.

**VITRIFICATION.** The act or process or operation of converting into glass by heat.

**VITRIFIED.** Converted into glass.

**VITRIFIED FORT.** An ancient enclosure on various hill crests in Scotland, the walls of which were more or less vitrified.

**VITRIFORM.** Having the form of or resembling glass.

**VITRIFY.** To convert into glass by fusion; to become glass by fusion.

**VITRIOL.** Sulphuric acid, *i.e.*, oil of vitriol.

**VITRIOLATE.** To convert into a vitriol or sulphate.

**VITRIOLIC ACID.** Sulphuric acid.

**VITRUVIAN SCROLL.** An ornament consisting of a series of continuous scrolls; named after Vitruvius, a Roman architect.

**VIVIANITE.** Phosphate of iron of various shades of blue and green.

**VIVO.** The shaft of a column.

**VOID.** Any large opening such as an archway on a wall or an inner court on a plan.

**VOIDER.** In heraldry, one of the ordinaries, whose figure is similar to that of the flanch.

**VOLANT.** In heraldry, represented as flying.

**VOLATILE or ESSENTIAL OILS.** Are generally colourless at first but become darker, thicker and eventually are converted into a kind of resin upon exposure to the air and light; generally produced by distillation, and retains an odour resembling the plant from which they are produced.

**VOLT.** The unit of electro-motive force. One "volt" will force one "ampère" of current through one "ohm" of resistance.

**VOLT.** The practical unit of electrical pressure. It will cause a current of one ampère to flow through a conductor of one ohm resistance, giving to it (the current) the power, equal to one watt, of doing work to the amount of one joule per second.

**VOLTAGE.** Electrical pressure, electro-motive force (E.M.F.) or potential difference. It is that which moves or forces a current through a conductor. It is analogous to "head" of water, which forces a current of water through a pipe. Current cannot flow without voltage.

**VOLTAIC APPARATUS.** An apparatus for accumulating voltaic or galvanic electricity.

**VOLTAIC BATTERY.** Voltaic apparatus of considerable size.

**VOLTAIC ELECTRICITY.** That evolved by voltaic apparatus.

**VOLTAISM.** That branch of electrical science which has its source in the chemical action between metals and different liquids.

**VOLTAMETER.** An apparatus by which current is sometimes measured. The action is electrolytic; a certain weight of metal (copper or silver) is deposited which is directly proportional to the current and to the time taken in each measurement.

**VOLUTE.** The characteristic ornament of the Ionic capital, formed by a kind of spiral scroll; the small circle in which it terminates is called the eye of the volute. The Ionic volutes differ essentially from those in the Corinthian and Composite capitals which are continuations of the helices or stalks.

**VOLUTED.** Having a volute or spiral scroll.

**VOMITORY.** A principal entrance of a large building.

**VORANT.** In heraldry, the representation of a fish devouring any live animal.

**VOUSSOIRS, ARCH BRICKS.** A term applied to the wedge-shaped stones or bricks (but not to the keystone) used in building arches over windows, door openings, etc.

**VULCANITE or VULCANISED INDIA-RUBBER.** A compound of indiarubber and a large proportion of sulphur.

## W.

**WACKE.** A rock of a greyish-green colour, nearly allied to basalt.

**WAD, WADD.** An earthy oxide of manganese.

**WAFER.** A small plug or thin disc of wood placed over the head of a screw (which has previously been sunk below the surface); used to conceal the head of the screw; frequently the "wafer" is in the form of a small patera.

**WAGON-HEADED CEILING.** A cylindrical ceiling.

**WAINSCOT.** A term now almost exclusively applied to oak; cut principally from Russian logs; in conversion, it is cut at an angle with the medullary rays to show the "figure," "flower," "dash," or sectional plates of the medullary rays; generally used for high-class

joinery, it being free from knots, straight in grain and easily worked.

**WAINSCOT or DUTCH WAINSCOT.** A term applied to oak imported from Holland and Riga in semicircular logs.

**WAINSCOT.** Wood panelling fixed round the walls of an apartment; so called from its being generally and originally made of wainscot oak.

**WAINSCOTTING.** Wooden panelling round the walls of an apartment; the materials for same.

**WAINSCOT VARNISH.** Consists of a gum anime, clarified oil, litharge, sugar of lead and copperas, boiled together till strongly stringy and then mixed with turpentine.

**WAIR.** Formerly, a piece of plank six feet long and twelve inches wide.

**WALHALLA.** An architectural monument, especially that near Ratisbon, consecrated to the memory of illustrious men of Germany.

**WALING.** A horizontal plank placed across the middle of each row of poling boards in narrow excavations or in a cofferdam to support sheet piles.

**WALL.** A structure of stones, bricks or other material.

**WALLED.** Enclosed or fortified with a wall.

**WALLER, WALL MASON.** One who builds stone walls; the rougher the stones the more skill is required in constructing the walls.

**WALLERITE.** A variety of clay.

**WALL HANGINGS.** Wallpaper or other material fixed to walls for decoration.

**WALL HOLD.** In Scotland, a wall plate; also used in the same sense as bearing.

**WALL HOOK.** A large iron nail with a flat head on one side; used for securing sheet lead to a wall; also a large nail with a hook to secure a pipe to a wall.

**WALLING.** A term generally applied to walls built of stone; there are three modes of building or bonding, *viz.*, random rubble, coursed rubble, square or irregular snecked rubble and coursed and irregular ashlar.

**WALL LININGS.** Those covering the surface of walls.

**WALL PAPER.** A paper, of different qualities, for covering walls of apartments.

**WALL PIECE.** A flat piece of timber placed up against a wall into which the heads of the shores thrust.

**WALL PLATE, TRAUS PLATE.** A general term applied to almost all horizontal timbers laid upon walls to receive other timbers, as the ends of joists, rafters, etc.

**WALL SPRING.** A spring of water issuing from stratified rocks.

**WALL STRING.** In staircasing, the string placed against the wall (and plugged to it) into which the treads and risers are housed.

**WALL TIE.** A kind of wrought or cast iron strap; used for tying hollow walls together.

**WALNUT.** A wood of a greyish-brown colour, with black-brown pores; frequently beautifully figured; easily worked, but liable to warp; frequently used for high-class joinery.

**WANDERING HEART.** In timber, is when the heart, instead of running straight through the log, travels first to one side and then to the other, which can easily be seen by the grain of the wood.

**WANES.** The flattened or rounded angles of timber showing the bark after being converted.

**WANNEY EDGES.** A term applied to timber, or its edges, having "wanes".

**WANNEY TIMBER.** Logs not perfectly square, owing to its being cut too large for the size of the tree, thus leaving the bark ("wanes") on its corners.

**WANT.** The quantity an irregular figure wants to make up a rectangle, etc.

**WARD.** A division or apartment of a hospital.

**WARD FILE, WARDING FILE.** A very small thin file used in making or fitting keys.

**WARD LOCKS.** Those having projecting pieces of metal termed "wards" which are fixed in the interior of the lock, which can only be opened by a key shaped to work clear of the "wards". The term "wards" is also applied to the projections and indentations of the key itself.

**WARDROBE LOCK.** A lock having a small spring latch in addition to the bolt.

**WARDS.** Circular plates in a lock which hinder the action of any key but the one fitted to it.

**WAREHOUSE HUNG DOOR.** A method of hanging a door that has to be constantly kept open; the door is hung to the frame so that when open an unbroken surface is presented by the door and frame, giving it the appearance of a lobby enclosure.

**WARM COLOURS.** Those which have yellow or yellow and red for their basis.

**WARMING STONE.** A stone dug in Cornwall, which retains heat a great while.

**WARNING PIPE.** A term sometimes applied to the pipe which discharges the overflow from a cistern. Same as "overflow pipe".

**WARP.** Timber is said to "warp" or to be "warped" when it has altered from its original form, generally through seasoning, etc.

**WARPED.** Said of timber bent from its original form by the atmosphere; all timber, however dry it may be, "warps" more or less.

**WASH.** A thin coat of colour.

**WASH BOARD.** Formerly applied to a skirting round a room; the Scotch term for a skirting.

**WASHED BRICKS.** Those made from clay which has been through the process of washing.

**WASHED JOINT.** In plumbing, is when a wiped joint has a dirty appearance; it is wiped with a wet sponge, or a tallow candle is rubbed over it while the joint is hot and the grease wiped off with a clean rag.

**WASHED SAND.** That which has been washed to free it from impurities.

**WASHED STOCKS.** A term applied to the commonest malms used for ordinary building.

**WASHER.** A small thin disc of iron, or other metal or material, pierced in the centre for the passage of a screw or bolt; used to prevent the screw or bolt from sinking into the material when screwed up, thus preventing injury.

**WASHER.** A brass socket at the bottom of a basin or cistern for fixing a plug or waste pipe to.

**WASHER.** A ring of leather or india-rubber, etc., for making a joint tight.

**WASH OUT CLOSET, WASH DOWN CLOSET.** That consisting of a basin and trap usually constructed in one piece and provided with a ventilating arm, the excreta being collected in the basin and driven out into the trap by the "flush".

**WASTE.** To roughly reduce a stone to the required form and dimensions.

**WASTE.** A short piece of brass tube with a washer for fixing a standing waste pipe to.

**WASTE GATE.** A gate to let the water out of a pond when not wanted.

**WASTE PIPE.** The pipe through which a bath, lavatory basin or sink discharges refuse fluids; they either discharge their contents directly into the house drain or into the soil pipe.

**WASTE PREVENTOR, WATER WASTE PREVENTOR.** A small cistern in a water-closet which empties itself when the action is started.

**WASTE WEIR.** An overfall or weir for the superfluous water of a reservoir or canal.

**WASTING.** Same as Scapple.

**WATER BAR.** A metal tongue in the bottom of a wood sill to prevent the water finding its way through it and the stone sill beneath.

**WATER BAR.** A contrivance of a more or less complicated form, for preventing the draught and water finding its way through the sill of a French casement.

**WATER BATTERY.** A voltaic battery in which water is used to excite electric action.

**WATER BELLOWS.** A machine for blowing air into a furnace by means of a column of water.

**WATER BUTT.** A large cask to collect rain-water.

**WATER CART.** A cart with a tank or a large cask of water for watering roads.

**WATER CEMENT.** Hydraulic cement, *i.e.*, cement which hardens beneath water.

**WATER-CLOSET.** That in which the discharges are carried off by water; a privy; generally termed a W.C.

**WATER DRAINAGE.** The drainage off of water.

**WATER ENGINE.** An engine to raise water.

**WATER GAS.** An illuminating

gas generated by making steam pass over burning carbon.

**WATER GAUGE.** An instrument for measuring the depth or quantity of water in a boiler, etc.

**WATER GILDING.** The gilding of metallic surfaces by covering them with a thin coating of amalgam of gold, and then volatilising the mercury by heat.

**WATER GLASS.** A solution of silicate of soda.

**WATER HAMMER.** The hammering noise heard in water pipes, caused by the water in a vacuum, which, not being supported as in air, falls against the side of the pipe with a sharp rap.

**WATER JOINT HINGE.** A hook and eye hinge with a cap over the hook to keep out water.

**WATER JOINTING.** A slight ridge left at the ends of each stone in a cornice to prevent the rain entering the joint, "water joint"; hence the term water jointing.

**WATER JOINTS.** See Saddled Joints.

**WATER LEVEL.** The level formed by the surface of water; a levelling instrument in which water is employed.

**WATER LIMES.** Those possessing the property (more or less) of setting under water.

**WATER LOCK.** Same as Water Seal.

**WATER METER.** An instrument or meter to measure the water that passes or is consumed.

**WATER MILL.** A mill whose machinery is moved by water.

**WATER OF CISTONAGE.** Water drawn from a stratum over and above the quantity annually absorbed, thus gradually exhausting the underground store.

**WATER POISE.** A hydrometer or instrument for ascertaining the specific gravity of liquids.

**WATER POWER.** The mechanical power or action of water.

**WATER RAM, WATER ENGINE.** A hydraulic ram or machine for raising water.

**WATER SEAL.** The stationary

water in a trap, through which liquids can but air cannot pass unless forced.

**WATER SEASONING.** Of timber, consists of totally immersing it and securing it under water, as soon as cut, for about a fortnight, to remove the sap; after which it must be carefully dried.

**WATER SPOUT.** A "gargoyle"; a rain-water pipe.

**WATER TABLE.** Any horizontal set-off in a wall sloped on the top to throw off the water.

**WATER TABLE.** A string course moulding or other projection in the wall of a building to throw off the water.

**WATER TANK.** A cistern for holding water.

**WATER THERMOMETER.** An instrument for ascertaining the precise degree of cold at which water ceases to be condensed.

**WATER-TIGHT.** Secure, to retain, or not to admit water.

**WATER VARNISH.** Consists of mixing ordinary water of ammonia with water, gum arabic and pale or white shellac, which produces a light-coloured varnish. Ordinary water varnish consists of mixing borax, shellac and gum arabic with water, or it may consist of lac dissolved in hot water with as much borax, potash or sodas as will dissolve the lac, the solution making a washable varnish.

**WATER WAY.** The aperture through which the water flows in a stop-cock.

**WATER WHEEL.** A wheel moved by water; an engine for raising water in large quantities.

**WATER WINGS.** Walls erected on the banks of rivers next and adjoining the piers of bridges, to secure the foundations from the action of the current; also called "wing walls"

**WATER WORKS.** Hydraulic machines or engines for raising water; forming reservoirs, fountains, etc.

**WATT.** The units of electrical power represented by one volt

multiplied by one ampère. The unit of electrical power, etc., is symbolised as follows:—

Current or Ampère . . .	C.
Electric motive force or volt . . .	E.M.F.
Resistance or ohm . . .	R.
Quantity or coulomb . . .	Q.
Capacity or farad . . .	F.
Energy or joule . . .	W.
Power or watt . . .	P.

**WATT HOUR.** The practical unit of electrical work (or power consumed) = 1 ampère × 1 volt × 1 hour. 1,000 watt hours is called Board of Trade unit.

**WATT METER.** An apparatus for measuring electrical power in watts or kilo. watts (a kilo. watt equals 1,000 watts).

**WAVED.** In heraldry, an indented outline in the form of waves.

**WAVED MOULDINGS.** Those consisting of rounds and hollows united without forming angles.

**WAVER.** A sapling or young timber tree.

**WEATHER.** A term applied to the durability of stone, slates, etc., under exposure to the weather.

**WEATHER BOARD.** A narrow sloping board fixed to the bottom rail of a door to keep the rain from driving in.

**WEATHER BOARDING.** Boards nailed slightly lapping one over the other; the boards are generally "feather edged".

**WEATHER COCK.** A vane in the form of a cock, to show the direction of the wind.

**WEATHERED.** Applied to rocks when the surfaces are altered in colour or their edges rounded off by exposure to the weather.

**WEATHERED.** Stones, etc., are said to be weathered when decayed by the action of the weather.

**WEATHERED.** A window sill, coping, plinth, etc., is said to be "weathered" when bevelled to allow the rain to run off; sloped to throw off water.

**WEATHERING.** The giving of inclination, slope or bevel to a surface to throw off wet; the action of the weather in altering or decaying stones, etc.

**WEATHERING TILING.** Vertical tiling against a wall.

**WEATHER MOULDING.** A label, dripstone, canopy or moulding over a door or window, sloped to throw off wet from the parts beneath.

**WEATHER SHAKES.** In timber, are clefts, cracks or shakes which form after the tree has been felled, and are due to shrinkage in seasoning.

**WEATHER SLATING.** Vertical slating against a wall, as the side of a house exposed to the weather.

**WEB.** Of a girder, the centre part which connects the two flanges.

**WEB.** In T iron the part at right angles to the cross piece or flange.

**WEDGE.** A piece of wood or metal of ► shape; used for various purposes.

**WEDGE.** In geometry, a solid of five sides, viz., a rectangular base, two rhomboidal sides meeting in an edge, and two triangular ends.

**WEEP HOLES or WEEPING PIPES.** Small holes or pipes left in retaining walls to allow water to escape.

**WEEPER.** The term applied to the water-distributing or sparge pipes for flushing urinal stalls.

**WEEPERS or MOURNERS.** A term applied to statues in the attitude of mourning.

**WEIGHING HOUSE.** A building furnished with machines for weighing goods; a contrivance called a weigh-bridge is generally fixed outside the building for weighing carts and their contents.

**WEIGHT.** In commerce, denotes a body of given dimensions used as a standard of comparison for all others.

**WEIGHT.** In mechanics, a quantity determined by the balance; the body moved as distinct from the moving force.

**WEIGHT.** Of stone, has frequently to be considered in building; heavy stones are best adapted for marine engineering works, etc., whilst light stones are best adapted for arches or similar work.

**WEIGHT OF RESISTANCE.** The force which is required to move or resist.

**WEIGHT OF TIMBER.** The average different weights of timber per cubic foot are as follows (approximate) :—

	Lb.
American Oak . . . . .	45
Spanish Mahogany . . . . .	66
Ash . . . . .	52
Beech . . . . .	53
Cedar . . . . .	35
Ebony . . . . .	63
Yellow Pine . . . . .	26
Pitch Pine . . . . .	45
Fir (Memel) . . . . .	37
Poplar . . . . .	24
Teak . . . . .	47
Walnut . . . . .	41
Willow . . . . .	34
Jarrah . . . . .	51
Maple . . . . .	47
English Oak . . . . .	53
Honduras Mahogany . . . . .	42
Birch . . . . .	42
Box . . . . .	57
Chestnut . . . . .	37
Elm . . . . .	42
Red Pine . . . . .	40
Fir . . . . .	33
Larch . . . . .	33
Sycamore . . . . .	38
Yew . . . . .	47
Black Walnut . . . . .	60
Alder . . . . .	35
Lignum Vitæ . . . . .	80

**WEIGHT SLATES, TON SLATES.** Those sold by the ton.

**WEIR.** A dam to stop and raise water for conducting it to a mill, reservoir, etc.

**WELCH or UNDERPITCH GROINS.** Those formed by the intersection of two cylindrical vaults, one of which is of less height than the other.

**WELD.** To join two pieces of iron or steel together by hammering it when heated almost to fusion.

**WELDABILITY.** The power of some metals of adhering firmly to portions of the same or to other metals when raised to a high temperature and hammered together.

**WELDING.** The act or process by which two pieces of metal are joined together with the aid of heat.

**WELDING HEAT.** The heat necessary for welding, or the heat to which the material is raised.

**WELL.** A pit or cylindrical hole sunk into the earth to reach a supply of water; the sides are generally walled to prevent the earth caving

in. When wells are bored they are termed "artesian wells".

**WELL or WELL HOLE.** In stair-casing, the central open space left in a staircase between the progressive and retrogressive flights; also applied to the space or hole left for the stairs.

**WELL COLLARED.** Said of large knots when they are firmly united to the surrounding timber.

**WELL DRAIN.** A drain like a well or pit to discharge the water of wet land.

**WELLINGTONIA.** Sequoia wood, or red wood.

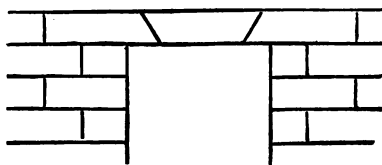
**WELL SINKING.** The act, method, or process of digging or boring wells.

**WELL SPRING.** A source of continual supply.

**WELL STAIRCASE.** A staircase having a well in the centre, *i.e.*, between the progressive and retrogressive flights; a spiral staircase.

**WELL WATER.** That flowing or drawn from a well fed by subterraneous springs.

**WELSH ARCH.** A very small square-headed arch.



**WELSH GROIN.** Same as Welch Groin.

**WELSH IRON.** Such as Ystalyfera, Gadlys, Blaenavon, Pentyrach, is produced from lean ores, and is frequently mixed with Cumberland, Spanish and other hæmatite ores.

**WELSH LUMPS.** A kind of fire-brick made in Wales, similar to Windsor bricks.

**WELSH RAGS.** A kind of Welsh slate.

**WELT.** In plumbing, a seam formed by dressing over the edges of lead.

**WELT, DOUBLE.** Two edges of lead turned up and folded one over the other and then flattened down.

**WELTED EDGE.** A lead welt formed on or over a square edge.

**WELT JOINT.** In lead laying, is when the edges of the sheets are turned up against each other and dressed over flat; also called a seam.

**WELT, SINGLE.** The edge of the lead turned back about one and a quarter inch to cover nailing.

**WESTWOOD DOWN.** A kind of superior bath stone free from vents and defects; can be quarried in large and sound blocks.

**WET PROCESS.** In making artificial cement, consists of the ingredients of the cement being mixed with a large body of water and afterwards dried, burned and ground; in Germany the ingredients are mixed dry.

**WET PUDDLING or PIG BOILING.** The modern process in which grey, unrefined pig iron is converted direct; the bed of a reverberatory furnace is lined with broken slag, cinder, etc., fused together, and having a layer of soft red hæmatite or puddler's mine on the top of it.

**WET ROT.** The decay of timber when saturated with water; it occurs in the growing timber, and in situations, when felled, where it may become saturated.

**WETTED PERIMETER.** That portion of the circumference of a sewer which is under water at any given moment.

**WHARF.** A wall or embankment formed on the side of a harbour, river, canal, etc.

**WHEEL.** A circular frame with spokes, or a solid circular piece of wood or metal turning on an axis.

**WHEEL AND AXLE.** One of the mechanical powers, consisting of an axle to which a wheel concentric with it is attached.

**WHEEL-BARROW.** An implement for conveying and removing earth, etc.

**WHEEL CUTTING.** The branch of mechanics which comprehends the modes of cutting teeth or cogs in wheels.

**WHEELING STEP or WHEEL STEP.** In Scotland a winder.

**WHEEL-RACE.** The place in which a water-wheel is placed.

**WHEEL WINDOW.** A circular window in Gothic architecture, with radiating mullions resembling the disposition of the spokes of a wheel. Same as Catherine-Wheel.

**WHEEL WORK.** A combination of wheels, in which motion is conveyed from the axis of one to another by means of teeth or cogs round their circumference.

**WHETSTONE.** A stone of fine quality used for sharpening edged instruments by friction.

**WHETSTONE SLATE, WHET SLATE.** A variety of slate used for sharpening iron instruments.

**WHIM.** A windlass or large capstan; used in mining; usually worked by horse-power.

**WHINSTONE.** The term by which the marl of the lower greensand is distinguished in Western Sussex.

**WHINSTONE.** Applied to balsamic rocks, or to any kind of dark-coloured, hard, unstratified rock which resists the pick.

**WHIP AND PULLEY WHEEL.** An iron pulley, about twelve inches in diameter, set in a slight iron frame, and used for raising weights by hand.

**WHIP SAW.** A saw usually set in a frame for dividing timber lengthwise; usually worked by two persons.

**WHISPERING GALLERY or DOME.** A corridor, balcony or gallery in a dome or cupola, in which whispers are conveyed to a great distance.

**WHITBED.** The second layer or bed of Portland stone; it has a fine even grain, and is considered one of the best building stones found.

**WHITBED ROACH.** The first layer or bed of Portland stone; consisting of a conglomerate of fossils; weathers well.

**WHITBY CEMENT.** A natural cement made by burning nodules; found in geological formations; sets rapidly, but attains no great ultimate strength.

**WHITBY'S, MULGRAVE'S or ATKINSON'S CEMENT.** Is made from the septaria of the Whitby shale beds of the lias formations in Yorkshire.

**WHITE CAST IRON.** Is produced from forge pigs, very hard, brittle, of a silvery hue, and contains very little free carbon; it can be converted into grey cast iron by melting and slowly cooling it.

**WHITE COBURG VARNISH.** Is of a very pale colour, dries in about ten hours, and in a few days is hard enough to polish.

**WHITE COPPER.** An alloy of copper, nickel and zinc; German silver.

**WHITE BRASS.** A term applied to various alloys used for bearings intended to work smooth; one alloy consists of three parts copper to ninety of tin.

**WHITE DEAL, WHITE FIR, SPRUCE.** Is found in England, North America, Norway and many parts of North Europe; deficient in strength and durability; the foreign spruce is imported in planks, deals or battens; white deal logs are seldom imported. Baltic spruce from Norway chiefly arrives in match boarding and flooring boards.

**WHITE DEALS.** Those cut from spruce; imported in deals nine inches wide and from two to four inches thick.

**WHITE DISTEMPER.** A mixture of whitening and size.

**WHITE HARD SPIRIT VARNISH.** Consists of dissolving gum sandarach in spirits of wine; when the solution is complete, pale turpentine is added, the whole being well shaken together.

**WHITE HEAT.** That degree of heat at which a body becomes white.

**WHITE IRON.** A term applied to iron that has been tinned.

**WHITE LAND.** That having a tough clayey soil, of a whitish hue when dry.

**WHITE LEAD.** Carbonate of lead; used as a white pigment. The names given to pure white lead prepared in different ways are: French, Roman, London, Nottingham, Newcastle or Krems or Vienna white.

**WHITE LIMED.** Whitewashed or plastered with lime.

**WHITE MANGANESE.** Carbonate of manganese.

**WHITENING or WHITING.** A mixture of whitening and size; used for internal work, such as ceilings, etc.

**WHITE OAK (*Quercus alba*).** Is also called American oak or pasture oak; so called from the white colour of its bark; it is of a pale reddish-brown colour, straighter and coarser in grain than English oak, but not so strong or durable; imported in logs from twenty-five to forty feet long, also in planks from two to six or ten inches thick.

**WHITE PYRITES.** A sulphuret of iron, of a pale bronze yellow colour.

**WHITESMITH.** A tinsmith.

**WHITE STONE.** A granite abounding in white feldspar.

**WHITE VITRIOL.** A white sulphate of zinc.

**WHITWASH.** A mixture of any common fat lime with water; used for "white liming".

**WHITWOOD.** An American wood of a greenish-white appearance; soft, even grained; works easily; liable to warp if wetted.

**WHITING.** Is made by grinding white chalk to a fine powder.

**WHITING, PARIS WHITE or SPANISH WHITE.** Is merely prepared chalk.

**WHOLE DEALS.** Those two inches or more in thickness.

**WHOLE TIMBER.** A term sometimes applied to timber from 9 × 9 to 15 × 15 inches square.

**WICKET.** A small door formed in a larger one to admit of entrance and exit without opening the larger door or gate.

**WILLEMITE.** A silicate of zinc.

**WILLESSEN CANVAS.** Is made in a similar way to the paper, and can be used with advantage in place of the ordinary canvas.

**WILLESSEN FABRICS.** Are vegetable substances treated with certain compounds of copper and ammonia, the effect of which is to coat and impregnate them with cupro-cellulose, a varnish-like substance which protects the surfaces and adds strength to the fibres by

cementing them together which enables it to resist the weather and render it less liable to catch fire.

**WILLESDEN WELDED PAPERS.** Are of different classes, all made in brown and neutral green colour; it consists of several thicknesses (plys) of paper formed into a compact sheet or thickness while still gelatinised by the action of cupro-ammonia solution. The paper marked W.P.G.2 is adapted for internal work, lining under slates, damp walls, etc.; that marked W.P.G.4 is weather-proof, does not easily catch fire, bad conductor of heat, does not require painting, free from condensation, adapted for outside work.

**WILLESDEN UNWELDED PAPER.** Is generally used for packing purposes.

**WIN.** A term used by miners, meaning to dig out or obtain.

**WINCH.** A windlass; a small crab; the crank or handle by which the axis of a revolving machine is turned.

**WINCH.** The gearing by which the ram is hoisted for driving a pile.

**WIND BEAM.** A timber laid diagonally under the rafters of a long roof, from the foot of one truss to the head of another to form a strut to prevent the roof racking with the wind; an obsolete term for a "collar beam".

**WIND BRACES.** Same as Wind Beams.

**WIND CRACKS.** Shakes or splits on the sides of a baulk of timber, caused by shrinkage of the exterior surface.

**WINDER WHEELING STEP.** A step or tread wider at one end than the other, required in turning a corner, or going round a curve; called "wheel steps" in Scotland.

**WINDING.** A door, surface, piece of wood, etc., is said to be "winding" or to "wind" if it is twisted or warped; it is said to be "out of winding" when perfectly true, *i.e.*, a true plane.

**WINDING ENGINE.** An engine employed to draw up buckets from a pit, etc.

**WINDING TACKLE.** A tackle consisting of one fixed triple block and one double or triple movable block.

**WINDLASS.** A machine for raising buckets, etc., from a pit, excavation, etc.; an application of the wheel and axle, in which a rope or chain with the weight attached is wound about a cylinder or roller moved by a crank, etc.

**WINDMILL.** A mill turned by the wind.

**WINDOW BACK or BREAST.** A piece of framing used to fill up the space between the sill and the floor; called "breast lining" in Scotland.

**WINDOW BOARD.** A horizontal board on the inside of a window; generally tongued into the sill.

**WINDOW BOSSING.** A recess in a wall on the inside beneath a window.

**WINDOW BOSSING.** In Scotland, a recess beneath a window on the inside.

**WINDOW FRAME.** That in which the sashes are fixed; it may be either "solid" or "cased".

**WINDOW GLASS.** Ordinary glass used for windows.

**WINDOW LININGS.** Are differently termed according to their position, as inside linings, etc.

**WINDOW SASH.** The sash or light frame in which panes of glass are set.

**WINDSOR or HEDGERLY FIRE-BRICKS.** Are of a red colour when burnt, and are made from the sandy slate-coloured loam used for the manufacture of "rubbers".

**WIND TIE.** Same as Wind Beam, Wind Brace, Diagonal Tie.

**WINE CELLAR.** An apartment generally in the basement, used for storing wine.

**WING.** In fortifications, the longer sides of horn works, crown works, etc.

**WING COMPASSES.** Those having a quadrant for securing the movable leg to when adjusted.

**WINGED.** In heraldry, represented with wings, or having wings of a different colour to that of the body.

**WINGS.** The fillets at the top and bottom of a moulding; the shifting side scenes of a stage.

**WINGS OF A BUILDING.** The side portions which are generally of a less height than the main building; a small building attached to the centre or main portion by a passage or arcade.

**WING WALLS.** The side walls of abutments.

**WIPED JOINT.** A joint made by plumbers in jointing two pipes together for the purpose of connecting them or lengthening them.

**WIPER.** A piece generally projecting from a horizontal axle for the purpose of raising stampers or heavy pistons and letting them fall by their own weight.

**WIPES OR SOLDER CLOTHS.** A small square of moleskin or stout cloth of several thicknesses; used by plumbers in making wiped joints.

**WIRE CUT BRICKS.** Those made by the clay being forced out of a rectangular opening in a solid length which is cut by wires at regular intervals to form separate bricks.

**WIRE GAUGE.** A standard gauge for ascertaining the thickness of wire.

**WIRE GAUGE.** A gauge for ascertaining the thickness of a wire. There are two in common use, the Birmingham Wire Gauge (B.W.G.) and the Standard Wire Gauge (S.W.G.).

**WIRING GARDEN WALLS.** A French system of fixing rows of wire along the face of a wall for training fruit trees.

**WIRE NAILS, FRENCH NAILS (POINTES DE PARIS).** Are round, square or oval in section; tough, strong; require no hole to be bored for them, and seldom split the wood; the oval variety is used in good joinery, the round and square varieties chiefly for packing cases.

**WIRES AND CABLES.** These are the forms in which conductors are most used. They are made of the purest copper, tinned to prevent corrosion, and insulated in various methods. Cables consist of a

number of small wires stranded together for the sake of flexibility. Tubes and rods, as well as bars of copper, gun metal, etc., are used, naked or uninsulated except by air, as occasion demands.

**WIRE WOVE ROOFING.** Consists of a semi-transparent substance upon a basis of very fine wire mesh, made in sheets ten feet by four feet, and ten feet by two feet; tough, elastic, strong, waterproof, and is not affected by atmospheric changes.

**WITHEs.** Light, thin shoots of any young wood.

**WITHS, WITHEs.** Partitions or the solid parts between flues where there is more than one in the same "breast".

**WITH THE GRAIN.** Implies along or in the direction of the fibres.

**WOOD ARCH, CURVED FRAME.** Either a curved built beam of several courses abutting end to end, or of two curved built beams parallel to each other with an interval between them connected by upright and diagonal pieces.

**WOOD BLOCK FLOOR.** A floor made of wood blocks; different sizes are adopted.

**WOOD BONDING, BOND TIMBER.** Long lengths of timber cut to form a four and a half inch course of bricks and laid the length of the wall to answer as a horizontal tie.

**WOOD BRICKS.** Pieces of wood cut to the size of a brick, built in walls for fixing door frames, etc., to.

**WOOD PLATE.** A wall plate.

**WOOD PLUG.** That driven into a wall for fixing joinery, etc., to.

**WOOD SCREW.** The ordinary metal screw for securing woodwork.

**WOOD SLIPS.** Thin pieces, generally fir, about  $9 \times 3 \times \frac{3}{8}$  inches or as required, built into the joints of brickwork at convenient intervals for fixing joinery to.

**WOOD'S PATENT CONCRETE BRICKS.** Are made from slag reduced by agitation in water to the state of sand, which is ground and mixed with one-seventh its bulk of lime; it is then forced into moulds under pressure and dried in the air.

**WOOD STONE.** A striped variety of hornstone.

**WOOD TAR.** That produced by the distillation of pine and other resinous trees; imported in barrels from the north of Europe, Stockholm, etc.

**WOODWORK.** Work in wood; that part of any work constructed of wood.

**WORK.** A general term used in various senses.

**WORK.** Is the result of power expended mechanically; power is expended in moving a body against resistance (friction); electrically, when an E.M.F. forces a current through a conductor.

**WORKS.** In fortifications, walls, trenches, etc.; fortifications in general.

**WORKED BY HAND.** Applied in joinery to any part executed without the aid of machinery.

**WORKED UP TO COURSES.** Implies that brickwork or masonry is worked to a given gauge in height.

**WORKHOUSE.** A house or building in which the destitute poor of a parish are lodged and maintained.

**WORKING BOX.** The bucket of a common pump.

**WORKING DRAWINGS, GENERAL DRAWINGS.** Show the whole extent of the building, such as plans of foundations, and the different storeys or floors of the building; also the elevations, sections, etc.; these drawings are carefully figured for working to, hence the term.

**WORKING LOAD.** The greatest dead load the material can with safety bear in practice; found by dividing the breaking load by that factor of safety which is suitable to the particular case.

**WORKING SOLDER.** That composed of two parts of lead and one of tin.

**WORKING STRESS.** That produced by the working load, and which the material has to withstand in ordinary work.

**WORKSHOPS.** As defined by the Factory Acts, are premises where labour is exercised, but where mechanical power is not employed.

**WORM FENCE.** A zigzag fence made by placing the end of the rails upon each other.

**WORMS.** Sharp-pointed spirals used for boring rock too hard for the auger; also applied to the threads of a screw; an endless screw.

**WORM WHEEL.** A wheel working into the spiral of a screw.

**WRACK.** Same as Brack, which see.

**WREATH.** In heraldry, the part between the mantle and the crest; also called a "torse".

**WREATH, WRITHE.** In handrailing, a twisted curve in a handrail, as in going round the well hole; also applied to the string.

**WREATHED COLUMNS, CONTORTED COLUMNS.** Those which are twisted in the form of a screw.

**WREATHED or WRITHE HANDRAIL.** That which ascends in a continuous curve round a circular well hole; that part of the rail within the springing of the well is known as the "wreath".

**WREATHED STRING.** That forming a continuous sweep round a circular well in a geometrical stair.

**WRECK.** A vessel in which ores are washed for the third time.

**WRENCH.** An instrument for screwing or unscrewing ironwork. Same as Spanner.

**WRITING SHORT.** In "quantity taking," is when it is desirable to give the detail of any particular item to arrive at a separate amount; the measurements of this particular item are taken out in detail and written immediately under the item. It is done to get a more accurate price for the particular item in question and also to ascertain the amounts affixed to the various items that in measuring up variations the various prices can be as per ratio.

**WROUGHT.** Applied to timber means planed; if planed by machinery it is termed "machine wrought".

**WROUGHT CLASP NAILS.** Are made either "fine" or "strong"; they have heads which project downwards and stick into the wood, hold-

ing it together; chiefly used for ledged doors or other work where the nail requires to be "clenched"; they are generally made by hand.

**WROUGHT IRON.** Malleable iron deprived of its carbon; it is very nearly the pure metal, and should not contain more than about 0.15 per cent. of carbon; forge pig is generally used for its manufacture.

**WURTEMBERG SYPHON.** One with both legs equal and bent upwards at the extremities.

**WYBORG DEALS.** Are generally of good quality but often full of sap.

**WYCH ELM** (*Ulmus montana* and *Ulmus glabra*). Is found chiefly in the north of England, Scotland and Ireland; it is tough, flexible, clean, straight in grain, and is somewhat lighter in colour than the common elm.

**WYND.** In Scotland, a narrow lane or alley.

**WYVERN.** In heraldry, an imaginary animal, frequently represented in coats of arms with the forepart of a dragon, the tail of a scorpion, and the feet of a bird, and with wings expanded.

## X.

**X.** As a Roman numeral, X stands for ten; when horizontal, for one thousand; and with a dash over it, for ten thousand.

**XANTHIAN.** Pertaining to or brought from Xanthus; as the Xanthian marbles in the British Museum.

**XENODOCHIU.** A building or a room in a monastery; used by the

ancients for the reception of strangers.

**XEROTINE SICCATIVE.** A species of terebinte, but differs from it in that, when mixed with oils, the mixture does not become cloudy; the siccative becomes dangerously explosive when stored.

**XYSTOS, XYSTUS.** In ancient architecture, a sheltered walk or a large portico in a gymnasium.

## Y.

**Y STANDARD.** An iron standard of Y section; used for fencing.

**YACCA WOOD.** A timber of small size obtained from Jamaica; used chiefly for cabinet work.

**YARD.** A measure of three feet; a paved area; a court or open space enclosed by walls and other buildings; the ground belonging to a workshop, as a "builder's yard," etc.

**YARE.** In Scotland, an apparatus for catching fish, consisting of two converging walls of stakes and brushwood, leading to a hanging net.

**YATE.** In the north of England, a gate.

**YELLOW COLOURS.** Yellow pigments, or substances yielding yellow paint.

**YELLOW EARTH.** A yellowish clay, coloured by iron.

**YELLOW DEALS.** Red or yellow fir timber imported in "deals" nine inches wide, and from two to four inches thick.

**YELLOW LAKE.** A pigment produced from alum, turmeric, etc.; does not mix well with oil or metallic colours, and is not durable.

**YELLOW MANSFIELD.** A limestone of a warm yellow colour; chiefly used for ashlar mouldings, columns, etc.

**YELLOW OCHRE.** A natural clay, coloured by oxide of iron, found abundantly in many parts of England; not very brilliant, well adapted for distemper work, not affected by light or air, keeps its colour when mixed with lime, which some of the other pigments will not do.

**YELLOW ORPIMENT, YELLOW ARSENIC, KING'S YELLOW.** A pigment made from arsenic; it

injures several other colours when mixed with them; not durable, and is a dangerous pigment to use in internal work.

**YELLOW PINE.** Is imported from America and the Baltic; it is sometimes called Weymouth pine; easily worked, well adapted for framing, patterns, moulds and panels; durable when seasoned, not liable to twist; not so strong as red deal, and soon decays if left in the log size.

**YELVEN.** In thatching, a double handful of straw.

**YORK or YORKSHIRE STONE.** Is generally a light yellowish-brown in colour; consists of grains of sand cemented together by silica, carbonates of lime and magnesia, alumina and oxide of iron; fourteen and a quarter cubic feet go to make a ton.

**YORKSHIRE LIGHT.** A kind of casement window with one sash fixed and the other sliding horizontally.

## Z.

**ZACCHO.** The lowest part of the pedestal of a column.

**ZARNICH.** The native sulphurets of arsenic, realgar and orpiment.

**ZAT, ZAX, SAIXE.** A slater's axe for trimming slates, etc.

**ZECHSTEIN.** A magnesian limestone forming the upper portion of the permian formation.

**ZENANA.** The part of a house in India reserved for the women.

**ZERO.** The point of a thermometer from which it is graduated.

**ZETA.** A little closet or chamber with pipes running along the wall to convey into it fresh air.

**ZETA.** Applied to a room over the porch of a church.

**ZETICULA.** A small withdrawing room.

**ZIGZAG.** A moulding used in Norman architecture; generally formed by lines arranged in the manner of the "chevron," or a zigzag line.

**ZIGZAG RIVETING.** That in which the rivets in one row are opposite to the spaces in the next.

**ZIMENT WATER.** Water found in copper mines impregnated with copper.

**ZINC.** A metal of a white colour somewhat like tin. The best zinc is manufactured in Belgium; not much used as a roof covering on account of its colour, lustre and destruction from the acids in rain-water.

**ZINC BLENDE.** A compound of sulphur and zinc.

**ZINC FLASHING.** A coating of thin zinc applied to iron or steel after pickling for protection.

**ZINC GAUGE.** A standard gauge for ascertaining and denoting the thickness of zinc.

**ZINCITE.** Red zinc iron.

**ZINCOTE.** The positive pole of a galvanic battery.

**ZINCUS.** Pertaining to zinc, or to the positive pole of a galvanic battery.

**ZINC PAINT.** That made with oxide of zinc instead of white lead as a basis.

**ZINC WHITE.** An oxide of zinc, which will not combine with oil, or cover so well as white lead, dries slowly, becomes very hard, and will take a fine polish; more difficult to work than white lead, and requires special driers; applied to several white pigments prepared from zinc.

**ZINKED IRON.** A term formerly applied to galvanised iron.

**ZINKENITE.** A steel grey ore of antimony and lead.

**ZOCLE, ZOCCO, ZOCCOLO.** A low plain square member or plinth of a pedestal or base of a column.

**ZOFRA.** A kind of Moorish floor-cloth or carpet.

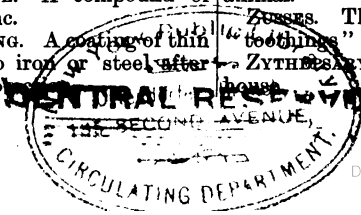
**ZONE.** A band or stripe running round any object.

**ZOOPHORUS.** A frieze; so called from the figures of animals carved on it.

**ZOOPHORIC.** Applied to a column which supports the figure of an animal.

**ZOSSES.** The obsolete term for "toothings" (which see).

**ZYTHESARY.** A brewery or brew-house.



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